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PATENTS FOR INVENTIONS.

ABRIDGMENTS

OF

Specifications

RELATING TO

MEDICINE, SURGERY, AND DENTISTRY;

INCLUDING

ARTIFICIAL LIMBS, TEETH, &c., APPARATUS FOR INVALIDS,
MEDICAL BATHS, &c.

A.D. 1620–1866.

PRINTED BY ORDER OF THE COMMISSIONERS OF PATENTS.

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PREFACE.

THE Indexes to Patents are now so numerous and costly as to render their purchase inconvenient to a large number of inventors and others, to whom they have become indispensable.

To obviate this difficulty, short abstracts or abridgments of the Specifications of Patents under each head of invention have been prepared for publication separately, and so arranged as to form at once a Chronological, Alphabetical, Subject-matter, and Reference Index to the class to which they relate. As these publications do not supersede the necessity for consulting the Specifications, the prices at which the printed copies of the latter are sold have been added.

The number of Specifications from the earliest period to the end of the year 1866 amounts to 59,222. A large proportion of the Specifications enrolled under the old law, previous to 1852, embrace several distinct inventions, and many of those filed under the new law of 1852 indicate various applications of the single invention to which the Patent is limited. Considering, therefore, the large number of inventions and applications of inventions to be separately dealt with, it cannot be doubted that several properly belonging to the group which forms the subject of this volume have been overlooked. In the progress of the whole work such omissions will, from time to time, become apparent, and be supplied in second or supplemental editions.

This volume contains Abridgments of Specifications to the end of the year 1866. From that date the Abridgments will be found in chronological order in the "Chronological and Descriptive Index" (*see* List of Works at the end of this book). It is intended, however, to publish these Abridgments in classes as soon as the Abridgments of all the Specifications from the earliest period to the end of 1866 have appeared in a classified form. Until that takes place, the reader (by the aid of the Subject-matter Index for each year) can continue his examination of the Abridgments relating to the subject of his search in the Chronological and Descriptive Index.

This series consists chiefly of inventions relating to surgical instruments, medical baths, invalid beds and bedsteads, ambulances and invalid carriages, compound medicines, disinfectants, lotions, ointments, and artificial limbs and teeth. The inventions relating to the manufacture of sulphate of magnesia (Epsom salts) and such other salts, as well as alkalies and acids, which, although employed in medicine, are principally used for industrial purposes will be found in the series entitled "Acids, Alkalies, Oxides, and Salts." Veterinary medicines and instruments for the surgical treatment of domesticated animals must be looked for in the volume of abridgments relating to "Farriery."

The Abridgments marked thus (* *) in the following pages were prepared for another series or class, and have been transferred therefrom to this volume.

B. WOODCROFT.

March, 1872.

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MEDICINE, SURGERY, & DENTISTRY.

A.D. 1620, July 5.—N° 16.

DICKSON, John.—" Certaine conmodious instrument called a " back stall, back frame, or back skreene, for the ease and releife " of such sick persons and others as are or shalbe distempered " or troubled with heate of theire backes through continuall " keeping or lyeing on theire beddes."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1629, June 22.—N° 47.

GRENT, Thomas.—" A newe kind of bathes, being of a mixt " nature and consisting of divers distinct heates, termed circular " bathes, or bathing waterworkꝭ for divers vses."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1632, June 20.—N° 59.

GRENT, Thomas.—Among several mechanical inventions mentioned is the following :—" A moveable hydraulike or chamber " wethercall like a cabinett, which being placed in any roome or " by a bedside causeth sweete sleepe to those which either by hott " feavers or otherwise cannot take rest, and withall altereth the " drye hott ayr into a more moystining and cooleing temper, " either with musical sounde or without."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1678, March 25.—N° 200.

JENNENS, Sir William, and STISTED, Charles.—" Erecting certaine bainas to sweat, wash, and bath in, never " yett vsed in any of our dominions, which in remote partꝭ have " by long experience bin found to be of great advantage for the " p̃servac̃on of health by the speedy removal of severall diseases " and distempers incident to the body of man, and that hee

" hath ordered and contrived the same to bee all together as " beneficiall as any other bainas are in any other part of the " world."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1685, April 13.—N° 245.

MOORE, Thomas.—" A way for makeing better allom, and in a " cheaper way then is used or ever was att any such worke, and " also out of the said allom mines to make curious christalline " allom or allom-glasse for severall good uses and ornaments for " the public good, and preparations of allom, with other matters, " for medicinal, chirurgicall, mettallick, and minerall improve- " ments."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1698, July 15.—N° 354.

GREW, Nehemiah.—" The way of makeing the salt of the " purgeing waters perfectly fine in large quantities, and very " cheape, so as to be com̄only prescribed and taken as a generall " medicine in this our kingdom."

[No Specification enrolled. Letters Patent, Printed, 4*d.*]

A.D. 1711, October 22.—N° 388.

BYFIELD, Timothy.—" A new and most vsefull chimicall " preparoc̃on and medicine, publickly known by the name of his " 'sal oleosum volatile,' which, by abundant experience, hath been " found very helpfull and beneficiall as well in vses medicinall as " others, and will very much tend to the public vse and benefit of " all our subjects." The ingredients of which this preparation and medicine are composed are not named.

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1712, April 3.—N° 390.

STOUGHTON, Richard.—" A new and most vsefull restorative cordial and medicine," known by the name of " Stoughton's " elixir magnum stomachicū," or " the great cordial elixir," otherwise called " the stomatick tincture or bitter drops."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1721, August 12.—N° 434.

DE LA CHAUMETTE, Isaac. — " The making of divers " engines, machines, and instruments of several kindꝭ." This, it is said, consists, in reference to this subject, in " a turning " mattress fit for armies and hospitalls, that lasts four times " longer than the ordinary ones, and on which a man may shift " his place with pleasure and with great ease, coaches and chaises " that neither overturn or jolt."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1722, April 18.—N° 442.

EATON, Robert.—" A new chymical preparac̃on and stiptick " medicine, void of corrosive qualities, being both cordial and " balsamick, which vneversally stops all externall and internall " bleedingꝭ, and of itselfe heals all fresh woundꝭ."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1722, May 16.—N° 444.

SINCLAIR, George.—Raising and cultivating the plantꝭ which are commonly called or do produce the balsam of tolu, pero, and capair, dragon's blood, coloquintida, scam̄ony, rhubarb, contra herba, coffee, alkermes, jalap, gutta gamba, jesuit's bark, ippecacuana, agaric, and the sole breeding and curing the insect com̄only called cochenele, and the cultivating the plant or plantꝭ for the effects aforesaid which they feed and live vpon."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1726, March 31.—N° 483.

OKELL, Benjamin.—" A new chymicall preparac̃on and medi- " cine," styled " Doctor Bateman's pectoral drops," stated to moderate sweat and urine, and to be useful in rheumatism, afflictions of the stone, gravel, agues, and hysterics.

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1731, October 11.—N° 533.

LOVEL, Edward.—" A safe, pleasant, and powerful styptick for " the cure of the bloody flux, diarrhea, vomiting, and all internall " and externall bleedings or immoderate evacuations of any kind " whatsoever." It is stated that the remedy is very useful in the colonies and plantations for these particular diseases, from which the blacks suffer greatly, and "in their passage from Guinea to " the West Indies."

[No Specification enrolled. Letters Patent printed, 4*d.*]

A.D. 1742, May 13.—N° 584.

HAYWARD, Robert.—" A specific powder, which is a speedy " and effectual cure for the rheumatism, and a perfect ease and " relief, if not a certain and effectual cure, for the gout." The powder is a combination of antimony and nitre, pounded together in a mortar until the shining particles of the antimony disappear.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 120.]

A.D. 1742, August 14.—N° 587.

BETTON, Michael, and BETTON, Thomas.—" An oyl ex" tracted from a flinty rock for the cure of rheumatick and scor" butick and other cases." The oil is extracted from " the black " pitchy flinty roch or rock " lying immediately over the coal in coal mines, which is reduced to a powder and then is subjected to heat in a closed furnace, by which means the oil is obtained.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 120.]

A.D. 1743, July 21.—N° 592.

HOOPER, John.—" Medicine prepared in part chymically, and " compounded of severall ingredients, now comonly called by the " name of the Female pills." The pills are stated to be compounded of the best purging "stomatick and anti-hysterick " ingredients;" but the nature of these is not specified.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 156.]

A.D. 1744, January 18.—N° 596.

TURLINGTON, Robert.—" A specifick balsam, called the " balsam of life." It is compounded of storax, coriander seed, aloes, fennel, mastick, cardamums, frankinsence, anniseed, benjamin, angelica, gum elemy, cinnamon, guiacum, cloves, myrrh, nutmegs, gum arabic, winterbark, perne (peru ?) balsam, nettle seeds, tolu, juniper, saffron, mace, oil, St. John's wort, and marsh mallows. A sufficient quantity of rectified spirits being added to these various substances, the whole are digested and distilled in a glass vessel over a slow fire until they are reduced to the consistency of a balsam. In the specification the different proportions of these substances are given. This balsam is said to cure the stone, gravel, cholic, and inward weaknesses.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 121.]

A.D. 1744, January 19.—N° 597.

TANNER, Francis.—"A specifick pill, which is a local sudorific, "sweating one joint or limb only." The pill consists of scammony, rosin of jalap, coliquintida, mercurius dulcis, and turbith mineral. These being in fine powders are mixed with equal quantities of syrup of buckthorn and balsam of capivi, sufficient to make them into pills. In the specification the proportion of the ingredients is given, as well as other particulars regarded as promoting the success of the remedy.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 121.]

A.D. 1744, February 9.—N° 599.

GREENOUGH, Thomas.—"A tincture for cleansing and pre- "serving the teeth, and curing the toothach." The tincture is composed of salt of tartar, spirit of laurel, bastard orrice root, mint, roch alum, thebaic extract, cochineal, oil of vitriol, guiacum, camphor, sage, vinegar, henbane seeds, cloves, cinnamon, rose water, Hoffman's spirit of myrrh, cubebs, sal-amoniac, galls, sassafras, cinnamon water, Peruvian balsam, essence of lemons, rose leaves, and Balanstine flowers. These different substances are mixed together and a tincture is extracted from them by the means ordinarily employed for such purpose. In the specification the proportion of the ingredients used is given.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 121.]

A.D. 1744, February 17.—N° 600.

COLLETT, Joseph.—"An elixir for the cure of the dropsy, "jaundice, stone, and gravel." This patent remedy is composed of "the root of turmerick, the best juniper berrys, a little Casteil "soap, and a proportionable quantity of gum guajcum." These are infused and digested in rectified spirit according to the usual processes employed, and afterwards, being filtered, the medicine is ready for use.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 121.]

A.D. 1744, February 17.—N° 601.

HENRY, PETER.—"A certain chymical preparation called the "nervous medicine, which had been found to be effectual in the "cure of all nervous cases, such as convulsive fits, epilepsys, "vertigos, hypochondraick melancholly, histerics, vapours, low-"ness of spirits, and palpitation and trembling of the heart." The said remedy is composed of assafœtida, amber, myrrh, Peruvian bark, and salt of tartar. These substances are mixed together and pounded in a mortar, and by the agency of spirits chemically employed the medicine is extracted.

[Printed, 4*d.* No Drawings.]

A.D. 1744, May 9.—N° 603.

CERRETI, NICHOLAS.—"A certain Greek water, which hath "been found to be an effectual, easy, and safe cure and preserva-"tive for any venereal distempers." This Greek water is compounded of "aqua chalybea, aqua vite, vinum, sal gemmenni, sal "alkali, and pulvis coriarino." These substances are mixed together and used as an injection.

[Printed, 4*d.* No Drawings.]

A.D. 1746, April 3.—N° 617.

NEELER, EDMUND.—"A certain medicinal belt chimically "prepared." The ingredients used for the composition of it are the best white wine, olive oil, "carduus benedictus," valerian, sage and the leaves of St. John's wort. These several herbs, after being steeped in the oil and wine for six or eight days, are subjected to a slow heat, and stirred for two hours. The liquor being strained, white soap, frankincence, and Venice turpentine are added to it. The oil, which is obtained from these substances by distillation over a gentle fire, is mixed with quicksilver and the white of eggs, and beaten to the consistency of an ointment. This ointment is spread on list, which, being covered with a linen cloth and worn round the body, constitutes the "medicinal belt."

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 122.]

A.D. 1747, November 13.—N° 626.

JAMES, ROBERT.—"A powder and pill which, in a few hours "and with a very few doses, most effectually cures acute fevers of "all kinds." The powder is prepared by calcining antimony by long-continued heat in an unglazed earthen vessel, adding to it from time to time any animal oil and salt. The compound is then boiled in melted nitre, and the powder is subsequently obtained by dissolving the nitre in water.

The pill is formed by the combination of quicksilver, antimony, pure silver, and sal ammoniac. The mercury is afterwards distilled by means of a glass retort, and the quicksilver so obtained is again mixed with a fresh quantity of the same ingredients, and the same operations are frequently repeated. The mercury after these processes, being dissolved in spirits of nitre, is distilled to dryness in a retort. It is then calcined to a fine powder, from which the pill is made.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 32 (*second series*), p. 327; Webster's Patent Law, p. 129, Case 64; Carpmael's Reports on Patent Cases, vol. 1, p. 367; Parliamentary Report, 1829 (*Patent Law*), p. 201; Merivale's Reports, vol. 2, p. 446; Patentees' Manual, p. 83. Rolls Chapel Reports, 6th Report, p. 122.]

A.D. 1747, December 9.—N° 627.

JACKSON, Thomas.—"A tincture or medicine" for the cure of "burns, scalds, green wounds, old bruises, strains, sprains, rheumatick, and many other maladies." "Oyl of bayes, oyl of palm, turpentine, tar, oil of Peter, and oyl of olives" are mixed together in an earthen jar, and occasionally stirred, during eight days; they are then gently boiled, and the liquor filtered is the tinture recommended for the purposes stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 122.]

A.D. 1748, July 12.—N° 633.

BAKER, Walter.—"New chymical preparation and medicine which he has stiled Schwanberg's liquid shell." The pearly and transparent parts of sea shells, by the application of heat, are calcined to nearly an alkali, and being mixed with a quantity of "factitious salt," are again calcined, and after being dissolved and filtered the liquid shell is produced.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 123.]

A.D. 1749, February 23.—N° 641.

SEDGWICK, William.—"The art or mystery, or method of making a drugg called sal ammoniack or armoniack, of greater purity than any hitherto imported from foreign parts." Bones, horns, blood, or any animal substance is put into an iron pot, to which is attached an earthen or glass receiver for the purpose of distillation. Heat is then applied, and gradually increased for various periods, according to the size of the iron vessel and the quantity of the materials employed. The salt, spirit, and oil collected are afterwards put into a vessel and allowed to stand until they separate. The salt and spirit obtained apart from the oil are further subjected to distillation. The pure salt which results is then mixed with the "*spirit of sea salt,*" and after the liquor has been filtered through paper, it is evaporated by gentle heat to dryness, and the substance remaining is the "true sal ammoniac." The "spirit of sea salt" is formed by mixing together common sea salt and clay, both thoroughly dried and powdered, which, being put into an appropriate earthen vessel, are subjected to distillation by means of a reverberatory furnace, and in the ordinary processes of distillation the "spirit of sea salt" is collected in the receiver.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1749, December 6.—N° 650.

SMITH, Thomas.—"A new compound medicinal powder to be "used in the nature of and which I called my medicinal snuff, "and which I had with great labour, industry, application, study, "and at a great expense, brought to a very surprizing degree of "perfection in the cure of capital disorders of the hypocondriac "and melancholly kind, as also of impostumatious agues in the "head, ejection or polypusses, and various other and similar "indispositions, as had been duly proved by a variety of suc- "cessful experiments, and which I was ready to make appear "by unexceptionable evidence when called upon by authority "thereto." "Take two ounces of knotted margerum, six ounces "of marum, and two ounces of acrimony, one pound of asser "tobacco, and two ounces of balm, and one ounce of lily "comvally," these are powdered and sifted fine, and one teaspoonful is "struck for a dose up the nose as snuff going to bed, "and repeated every six days as long as the patient sees con- "venient."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 123.]

A.D. 1751, March 27.—N° 661.

FRAUNCES, Joseph.—"A new chemical preparation, which I "called by the name of the female strengthening elixir, which is

" extracted from the most powerfull parts of the materia medica, " and is a most excellent and almost infallible remedy for the " fluor albus in women, and in men an excellent restorative " and a most efficacious remedy in all seminal weaknesses " and debility of the genital parts, from whatsoever causes " arising; that, in constitutions worn down with long and " tedious illness, it will afford great relief by restoring the " lost spring of the solids, and that it raises the spirits, removes " hysterical complaints, and gives new life and vigour to his " whole body." The aforesaid remedy or "elixir" is prepared as follows:—The "lapis smaragd, topaz hyacinth, sardin, and " sapphir," on being calcined are added to a quantity of spirit of wine, with a portion of antimony and "crocus Martis astringens." The mixture is placed for a lengthened period "in a dunghill," and after being strained and filtered, there is further added to it " balsam of capivi, tolu, male, franckincense," balm of Gilead, isinglass, shavings of hartshorn and of ivory, white nettle flowers, roots of bistort and tormentil, and the best dried rhubarb. These different substances, after being several times distilled, are mixed with "salt of vipers" and camphor, and are digested for a considerable time in a sand heat. The filtered liquor is the elixir in question.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 125.]

A.D. 1751, October 17.—N° 665.

ROCK, Richard.—"A new compound medicine or anti-venereal " cathartick electuary for the true cure of flesh venereal injuries, " and all the lurking relicts or remains of old ones, and which I had " with great labour, industry, application, study, and at a great " expence, brought to a very surprising degree of perfection in " the cure of the several stages of the venereal distemper, from " the slightest infection to the most inveterate degree thereof, " without breaking and impairing the constitution, inervating the " human system, or leaving either foulness or weakness behind." The medicine is formed by the combination of jalap, salt of nitre, " electuary lenitive," salt of amber, salt of vipers, senna, Æthiop's mineral, calomel, rhubarb, calcined quicksilver, "tartar vitrio- " lated." These several substances being finely powdered to form the required electuary, are mixed with the syrup of marsh mallows.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 125.]

A.D. 1751, December 31.—N° 666.

LANGLEY, James.—" A new method of managing or manu-" facturing some English vegetables and other things of home " produce, so as to make from them several very useful commodities, " one of which is an oil which gives present ease in fits of the " gravel and stone, is the greatest anti-scorbutic and pectoral of " anything of the kind, and as fine and pleasant for eating as the " best olive oil itself; that these things of home produce now " make little or nothing, but, as manufactured by him, would be " of considerable advantage to his Majesty's revenue, as well as to " his subjects." The English vegetables to which the Patent refers are " mustard, angelca daucus or wild carrot, fennil, cummin, and " anniseed." The patentee states he has discovered that mustard seed contains two substances, a very fine oil, softening and relaxing in its nature, and an active and stimulating salt. He further observes, that after the oil is extracted, he makes better " flower of " mustard " than was ever manufactured before. After the oil is drawn and the flower sifted, he ferments and distils from the bran a wholesome spirit and a hot liquor good for pickle, useful in cold weather, and for scurvy at sea. Vinegar is likewise made from the bran. By subjecting the vegetables above named " to the fumes " of hot water," an oil is pressed out and is mixed with that obtained from the mustard seed, and the combination of the two constitutes the remedy for the diseases mentioned. From the said oil a soap is made applicable to the said affections. From the offals, shreds, and pieces and parings of leather the patentee proposes to make a kind of paper which will be useful for cartridges, to gild for hangings, bookbinding, and other purposes. He likewise states that he makes paper from offal, cotton, and other things which have previously been regarded as worthless, and lastly, glue.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 125.]

A.D. 1752, January 1.—N° 667.

WEST, George.—" A peculiar composition which gives imediate " ease in all diseases in the breast, and which I call West's pec-" toral elixir." The remedy is formed as follows :—The roots of liquorice, dried elecampain, angelica, and of orris are bruised and cut into small pieces, to which are added figs, Malaga raisins, honey, salt of tartar, and raisin brandy. When these different ingredients have been infused a considerable time the liquor is strained. The next step is to pound garden snails and millipedes, and then by repeated stirring to incorporate them thoroughly with the above strained liquor, adding to this Spanish juice, gum arabic, gum tragacanth dissolved in spring water, the whole being well mixed together; after which, the flowers of benjamin, gum stryace, camphor, and gum benjamin, each powdered, with the balsam of tolu and opium, being separately dissolved in spirits of wine, are put in stone bottles securely corked, and the latter are then subjected to a sand heat and frequently shaken. When these different substances are completely dissolved, they are mixed with the aforesaid strained liquor, and to this is added, by little at a time, spirit of sulphur; and when the fermentation caused by this ceases, there is further put in oil of anniseed and a decoction, obtained clear by the usual methods, made from the following vegetable ingredients: "coltsfoot, horehound, isop, " scabiouse, maidenhair, ground ivy, marsh-mallows, roots and " leaves, St. John's wort, angelica," parsley, and linseed, and a certain quantity of honey. When the whole has been well stirred for a given period, it is then put into casks and put aside for several months, after which it may be bottled and is ready for use. In the specification the different proportions of the substances employed are stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 125.]

A.D. 1752, July 1.—N° 672.

HOOPER, John.—"New invented medicine, prepared in part " chemically, and compounded of several ingredients, called by " the name of the child-bed cordial and powders, and also my " strengthening balsam and strengthening powders." These are made "of cordial and antispasmodic ingredients, prepared by " distillation and infusion. The powder to promote pains is " prepared of warm stimulating ingredients, and given about a " scruple for a dose. The other powder to ease the after-pains " is prepared of uterine and antidolorific ingredients, and given " in the same dose as the former."

"And the other new-invented medicines, called by the name of " the strengthening balsam and powder are prepared as followeth " (that is to say)":—

"The balsam is compounded of dissolving and discusing ingre- " dients, infused in a proper menstruum, and to be used full and change of the moon. The powder is compounded of attinuating " and antifebril strengthening ingredients, and given about a " scruple in a dose when the balsam is used."

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1752, July 3.—N° 673.

COLLETT, Joseph, and **JACKSON**, James. — "A certain " medicine called oleum anodinum, or British balsam of health, " for the cure of gouty nodes and tumous, rheumatick and " sciatick pains, fistulas and ulcers, the evil and leprosy, bruises, " and sprains, the dropsy, stone and gravel, sterility and im- " potence, consumptions, and other disorders of the breast and " lungs." "A hard substance" not named, but which appears to be coal, is pounded, and being mixed with red sand is put into a proper iron vessel, to which is attached a glass tube and a receiver, and on the application of a slow fire drops come over, and when these become large and sink to the bottom, the receiver is then removed and a glazed earthen vessel is substituted to carry on the same process, and a fire is raised and kept up so long as any drops fall into the earthen vessel. That which remains after the distillation is subjected to a sand heat and is boiled and skimmed until it becomes transparent to the eye. The oil, which had come over in the earlier stages of the operations, after being rectified, is mixed with the substance in the iron vessel, and the two are digested until they attain the consistency of a balsam, which is the one in question.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 126.]

A.D. 1753, March 6.—N° 677.

LEAKE, Walter.—"A pill which he called pilula salutaria, or " health-restoring pill, which he has with great labour, industry, " application, study, and great expence brought to a very sur- " prising degree of perfection in the cure of general chronical " diseases in all those of the cutaneous kind, from the itch to the " leprosy, and that in a singular manner it proves a remedy for " those named rheumatism, scurvy, and venereal." The ingredients used are calomel, sulphur of antimony, and prepared steel, which, after being intimately mixed together, are formed into a mass for pills by means of balsamic syrup.

[Printed, 4*d.* No Drawings.]

A.D. 1753, April 5.—Nº 680.

JACKSON, Humphry.—"A certain medicine called cordial "bitter tincture for the stomach." The inventor describes three different preparations which enter into the composition of the remedy. The *first* is formed as follows:—The bruised root of Florentine orris, and salt of Tartar are mixed with a quantity of proof spirit, and subjected to the ordinary method of distillation. To the spirit obtained in this manner is added strong spirit of vitriol, and the process of distillation is again employed, and the spirit which is collected is "*the rectified spirit*" of the inventor.

To form his *second* preparation, saffron, cardamum seeds, Virginia snake root, and "ginseng root" are infused for several days in a given quantity of "the rectified spirit" mentioned, and the spirit by means of distillation is drawn off. To this is added kermes juice, cinnamon, and mace, and the spirit again obtained by distillation is "*the compound spirit of saffron.*"

To make his *third* preparation, West India ginseng root sliced, the tops of the "lesser centaury fresh gathered," and calamus aromaticus sliced, are boiled in a given quantity of water for several hours, and after being strained, French brandy and pure water are added to the decoction, and this being subjected to a gentle heat for several days, is afterwards evaporated to the consistency of an extract, which is his "*compound extract of ginseng.*"

The inventor further describes the making of a tincture, which is as follows:—Dried and fresh peeled rind of Seville oranges, fresh peeled rind of ripe citrons, gentian root, cardamum seeds, Peruvian bark, and cochineal are added to certain quantities of "the rectified spirit" of "the compound spirit of saffron," of "the compound extract of ginseng root," and of water; the whole is infused for a considerable time in a warm place, and being strained through flannel, and then paper, is fit for use. A large quantity of ale is put to the ingredients which remain, and after being infused for a lengthened period and strained, the liquor is stored away in proper casks for use. The proportions of the different substances employed are stated.

[Printed, 4*d*. No Drawings.]

A.D. 1753, August 1.—Nº 684.

WRIGHT, William.—"A medicine which I called the cordial "mixture for women in labour, which long experience had con-

" firmed to me might be depended on for procuring the speedy " relief required at that critical period, and that I made no doubt " but (by the Divine permission) the said medicine would prove " instrumental in the saving many lives if the virtues and efficacys " of it were generally known." "This is a medicine which " greatly facilitates the labour of childbirth, and is of a cordial " nature, being a large compound of the most valuable cordial " productions of nature, together with other ingredients extracted " and combined both by chemical and Galenical preparation."

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report p. 127.]

A.D. 1754, December 2.—N° 695.

COLLETT, JOSEPH.—" The olium vitæ or ladies' nervous and " cordial drops, for the cure of nervous complaints, weakness " or contractions of the nerves and muscles, lowness or dejection " of spirits, vapours, histericks, convulsions, tremblings, and " palpitation of heart." " Put eight gallons of distilled river " water, and four gallons of the best Madeira wine, and six " pounds of sal ammoniack into a large vesica well tinn'd, then " put into it equal quantitys of the flower of camomile and rose- " mary, the tops of lavender, savery, mint, and sweet marjeram, " the ends of anise, and sweet fennel well bruised," stir well, " stop it down close," keep it blood warm for eighteen days, " then lute on the head, and draw off by a gentle fire almost to " dryness, then separate the oleaginous part from the other, and " put it into a glass vessel with a long neck; put to it of flowers " of benzion two ounces, flowers of sulphur four ounces; seal it " up close, and let it stand in warm sand 'till it comes to a proper " colour and consistence, which is then fit for use." Children from two to eight drops, grown persons from eight to twenty drops, " dropped on lump or powder sugar," " night and morning " till the cure is performed."

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 128.]

A.D. 1755, June 4.—N° 700.

LOWTHER, WILLIAM.—" New invented powders, called anti- " epileptic powders, which are an effectual remedy for appoplexies, " epilepsys, convulsions, hystericks, vapours, paralaticks, legar- " thys, tremblings, faintings, swimmings in the head, pains in the " stomach, worms, weakness in the nerves, retention of urine,

" want of appetite, lowness of spirits; strengthens the memory, " sweetens and thins the blood, and may be taken with the " utmost safety at all times by persons of either sex, and young " children may take it within the month."

In the composition of the powders the ingredients used are, holly, rosemary, the bones of the human skull, hellebore, peony, nitre, and "pulvis virmis, and foal's bitt," each being reduced to a fine powder; they are then mixed together for use. The proportions of the substances employed are not given.

[Printed, 4*d*. No Drawings.]

A.D. 1755, October 20.—N° 705.

TAYLOR, Jeremiah.—" Cordial draught for the cholick and all " other griping pains." The cordial draught is described as a fine spirit extracted from "the recrements of strong beer, nettle " water, anniseed, aloes, peppermint, juices of sugars, and camphor," the whole being mixed together for use. The proportions of the ingredients used are not stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1775, October 29.—N° 706.

WALKER, Robert.—" New-invented medicine, called Jesuits' " drops, which is not only an effectual remedy for the venereal " disease, but also all obstinate and inveterate gleets or weaknesses in the reins or kidneys, and is likewise a certain remedy " for purifying the blood in all scorbutic humours." The medicine is formed by the combination of "Venice soap, the balsams of " Peru, Tolu, and Gilliad, oil of sassafras, volatile salt of tartar, " Chio or Strasbourg turpentine," gum guiacum, and the balsam of capivi. The whole are put into a stone or glass vessel, and are digested for several days in rectified spirits of wine. The vessel is to be well stopped and occasionally shaken. The fine liquor which is drawn off is the above mentioned medicine.

[Printed, 4*d* No Drawings. See Rolls Chapel Reports, 6th Report, p. 128.]

A.D. 1757, October 31.—N° 716.

GREENOUGH, Thomas.—" New invented medicines for giving " immediate relief in pains and disorders of the stomach and " bowells and other membraneous parts of the body." One of the medicines is "called the volatille balsam," and is prepared as follows :—The "universal acid" and alcohol, both highly concentrated, are mixed together, and the "mineral anodyne liquor of " Hoffmann" is extracted from them, to which are added an essential vegetable oil and non-essential purified animal oil united to an alkali, oil of lavender, and "the fæcula of the Indian woad," all which ingredients being digested together for some time, the clear liquor which results is poured off, and is the above "volatille " balsam."

The other medicine is called "stomatick lozenges," the preparation of which is described as follows :—The substance "solutive " panacæa" is extracted from the "nitrous or marine mother " water," and when freed from fixed air is mixed with sugar, essence of carraway seeds, "cerasus trapezuntina of Parkinson," the essential oil of lemons, and the whole are made into lozenges by means of the "extract of the lapathum Hortense of Caspar " Baukine."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 129.]

A.D. 1757, November 12.—N° 718.

LOWTHER, William.—"Powders and drops." "The powders " are made of the several particulars and in manner following" :— " Pulvis compositiones, laureticus corvum nigrum cum plumis " exsiccatus, turmerick, mund secundine ex placenta moles ser- " pens Virgianæ, salis nitræ, depurate rad brionnia lumbricorum " preparatore pulverise, et m. f. s. a. Dosis N° q^{r} X. ad ʒ i." And the said drops are made of the several particulars and in manner following :—"Compositione guttæ laureticus, ether pre- " peratoræ, carranæ, teccha, machacca, chammumele floris, al salis " et spiriti camphiri, potestes succini, opoponæ cardamoms, wild " carrot, long pepper. Mithridate of each q. s. m. f. After you " have dissolved the gum, put all into a close vessel, overtop the " whole with spirit vini, and let them digest till the whole are " thoroughly incorporated."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1757, November 12.—N° 719.

LA BLACHE, Louis, Gov.—"New invented medicine, called " royal military drops, which are an effectual remedy for the " venereal disorder in all its various stages, ulcers, the king's " evil, and all scrophulous distempers."

These are made of the several particulars, "mercurius crudi et "cinabaris redivivi, salis marini, salis nitri depurate, vitriolis "viridi, aloes occetrinæ, mirrhæ, olibanum, balsamum Peru- "vianum, opii, spiritus vini, aqua pluvialis" (crude mercury, reduced cinabar, common salt, refined nitre, green vitriol, socotrine aloes, myrrh, olibanum, balsam of Peru, opium, spirits of wine, rain water).

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1758, August 16.—N° 728.

COLLETT, JOSEPH.—"Anti-arthritick wine and powder for the "cure of the gout." "The anti-arthritick wine" is prepared as follows:—Certain proportions of Madeira wine and French brandy are put into a vessel, to which are added the "roots of gentian, "snake root, and galangale, the tops of centory, burdock seed, "Russia rhubarb, saffron, the volatile salt of millepedes," and being digested for a considerable time without heat, the clear liquor is strained off and is fit for use. "The anti-arthritick "powder" is formed in the following manner:—The salt of tartar and saltpetre, the regulus of antimony, and the spirit of vitriol, after being rubbed together in a mortar, are then put into an iron crucible and calcined until the red fumes disappear. The substance which remains is afterwards reduced to a fine powder, and is then fit for use.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 129.]

A.D. 1758, August 16.—N° 729.

RYAN, JOHN.—"A medicine entirely new and not hitherto "practiced, for the safe, expeditious, and effectual curing of the "venereal disease, and which invention I had, with great labour, "industry, repeated experience, and at a considerable expence, "brought to such a perfection as to be of general utility and "benefit to the subjects of this kingdom, as no prophylactick "remedy (by which term I mean the essentia polychresta, goutes "de Peru, or the famous anti-venereal Peru drops, which are "incontestably the only absolute specific ever known or offered to "the public for the safe, expeditious, and effectual curing in both "sexes the several species and symptoms of the venereal dis- "ease, namely, the endemial malady of Peru, a clap, or virulent

" gonorrhœa, the yawes, now frequent and malignant, the plica " polonica, and a confirmed lues or pox, with all its deplorable " symptoms; and the said Peru drops are also, by the detersive " and anticeptick virtue, an effectual remedy for stubborn gleets, " seminal weaknesses, and inabilities, for the venereal piles, either " internal or external, and fistulous disorders, and are a certain " purifier of the blood in all scorbutick humours, cancerous, " leprous, and scrophulous cases; they are likewise a sovereign " antidote for the venereal gout, rheumatism, and scurvy, popular " diseases, yet commonly taken for constitutional disorders, as " they are a singular specifick for every species of fits, palpitations, " complicated, nervous, apoplectick, epileptick, and paralytic " disorders proceeding from a venereal cause, and are a prophilactick " remedy, or an admirable preservative against contracting " the venereal infection, that the said Peru drops are perfectly " innocent, devoid of all mercurials, and by their benign virtue " operate in a mild and friendly manner, eradicating the virulency " of the disease by stool, urine, and perspiration), or " thorough method has been hitherto adapted for the radical " cure of the said disease in its present complicated state of " malignancy."

" ℞. salis cujusvis alkalini fixi, antimonii crudi, spiritus vini " rectificati, a.a. q. s., ut fiat tinctura antimonium in pulverem " redactum, sali admisce, et igne forti liquescant simul per horam, " deinde effunde, in pulverem ridige, et spiritu affuso, adde pulverem " jalapii et bezoartum minerale secundum artem, digere " moderato, igne per duodecem dies ad extremum cola." (Take any fixed alkaline salt, crude antimony, rectified spirits of wine, of each sufficient to make a tincture. Mix the powdered antimony with the salt and melt them with a strong heat together for an hour; then pour off, reduce to powder, and pour in the spirit, add the powdered jalap and bezoar stones, digest at a moderate heat for twelve days at most and strain.)

" ℞. lignorum guiaci, sassafras, baccarum juneperi, opii, salis " tartari a.a. q. s., ligna et opium incidantur, digere moderato, " igne per totidem dies ut superius." (Take guiacum wood, juniper berries, sassafras, opium, carbonate of potash, of each sufficient. Let the woods and opium be thrown in, and digest at a moderate heat for a fortnight or longer.)

" ℞. bals. Peru, capiv., tolut, Giliad, gum guaiac., pulv. jalap., " rhei, sal. tart., sp. vin. rectif., a.a. q. s., digere pariter moderato

“ calore per duodecem dies. Omnia simul misce et serventur ad
“ usum.” (Take balsams of Peru, capivi, and of Gilead and tolu, gum guaicum, powdered jalap and rhubarb, carbonate of potash, rectified spirits of wine, of each sufficient; digest together at a gentle heat for twelve days; then mix the whole together, and keep for use.)

[Printed, *4d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 129.]

A.D. 1759, February 3.—N° 736.

STORY, Edward.—“A new compound medicinal remedy, called
“ rotulæ anthelminthicæ, or worm destroying cakes; which I had
“ brought to a surprising degree of perfection, for the eradicating
“ the semina or seed of worms, and for the effectual destroying of
“ worms in the bodies of men, women, and children, and for
“ cleansing the stomach and bowels from all manner of filth and
“ slime, and for giving immediate ease in cholicks and gripes,
“ and preventing their returns; and also for the cure of hydro-
“ pical disorders, yellow jaundice, agues, hooping or chin coughs,
“ bloody flux, and various other indispositions, as a great many
“ of his said Majesty's faithful subjects had already happily
“ experienced.”

The same is composed as follows :—“ ♃ resinæ zalapii, diagridii,
“ ana uncias quatuor, antimonii diaphoretici uncias duas, calo-
“ melini p̃p^{ti} uncias duodecim, tartari vitriolati, semunciam, floris
“ sulphuris albissimi unciam unam, cremonis tartari uncias sex,
“ cinnabaris antimonii recenter levegati unciam unam, olei cinna-
“ monii guttas decem, caryophillorum nucis moschatæ ana guttas
“ sexdecim, juniperi guttas triginta, sacchari albissimi libras
“ quinque, mucilaginis tragacanthi Arabici ana partes æquales in
“ aqua rosarum, factæ contunde optime in marmoreo mortario
“ ut fiat massa et exinde fiant rotulæ. Dosis singula con-
“ tineat scrupolos quatuor semis.” (Take resin of jalap, scammony, of each four ounces; antimonial powder, two ounces; prepared calomel, twelve ounces; sulphate of potash, half an ounce; white flour of sulphur, one ounce; cream of tartar, six ounces; cinnabar of antimony freshly levigated, one ounce; oil of cinnamon, ten drops; oil of cloves, oil of nutmeg, of each sixty drops; oil of juniper, thirty drops; white sugar, five pounds; mucilage of tragacanth, mucilage of gum arabic, of each equal parts, made with rose water. Beat the whole well in a marble

mortar and make a mass, and then make into lozenges. Each dose contains four scruples and a half.)

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 129.]

A.D. 1759, July 23.—N° 742.

WESSELS, HART.—"Medicine called tinctura embryonum," composed and prepared of the several particulars, and in the manner following:—

Recipe. "Coralliorum rubrorum uncias duas, lapidis hæmathit.
" is uncias quatuor terræ japonicæ uncias duas, caryophillorum,
" uncis moschatæ, zingiberis, aña unciam unam, cinnamoni
" acuti, unciam femissem radicis galangæ zedoariæ, una unciam
" unam, seminis anisi carui, ana unciam unam, ligni santali
" rubri unciam unam, sacchari albi libram dimidiam, florum
" lavendulæ, pugillos duos herbæ menthæ, salviæ, aña mani-
" pulos duos, salis tartari unciam dimidiam. Incisa et contusa
" infunde in spiritus vini rectificati, conqus duobus per octo dies,
" digere et cola per chartam bibulam tunc destilletur secundam
" artem; adde tincturæ radicis Braziliensis et tincturæ corticis
" Peruviam, ana unciam unam stent tunc per mensem et iterum
" distilletur cui postea; addo spiritus salis aromatici uncias octo
" et servitur ad usum." (Take red coral two ounces, red hematite stone four ounces, terra japonica two ounces, cloves, nutmegs, ginger, of each one ounce, cinnamon half an ounce, galanga, zedoary root, of each one ounce, anise seeds, carraway seeds, of each one ounce, red sandal wood one ounce, white sugar half a pound, lavender flowers two pinches, pepermint and sage, of each two handfulls, salts of tartar half an ounce. Cut and bruize and infuse in two gallons of spirits of wine for eight days, digest and strain through filtering paper, then distil, add tincture of Brazil root, tincture of bark, of each one ounce, let them stand for a month, and again distil; to which afterwards add eight ounces of sal volatile, and keep for use.)

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 157.]

A.D. 1760, February 21.—N° 746.

CALVERT, EDWARD.—"A most pleasant and useful cordial
" called the violet cordial, which discovery had been attended
" with a great loss of time and immense expense to me, the
" petitioner; that the said cordial is far different in its nature
" from anything yet found out or known, it being composed of

" none of those hot pernicious qualities of which other cordials " are made up, but is a fine and gentle reviver of the animal " spirits, and the finest medicine to expel wind at the stomach of " any yet discovered." The substances used in the composition of the medicine are, spirit, aromatic calamus mace, cloves, nutmegs, cinnamon, allspice, sal-volatile, sugar, vegetable juice coloured with violets, and "marum syriacum." The proportions of the ingredients are given, but no explanation of the process by which the medicine is prepared.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 130.]

A.D. 1760, March 26.—N° 748.

PIKE, Ann.—"An ointment which is a grand antedote for the " itch, and all scorbutic humours, being a sovereign and efficacious remedy that never fails for all eruptions and cutaneous " disorders, without confinement, daubing, or the least offensive " smell, the application being only to the palms of the hands." Two preparations are described as entering into the composition of the ointment. In the *first*, pomatum and calomel are mixed together and are allowed to stand several days; the same is likewise done with hogs' lard and Jesuit's bark. The four substances so acted upon are then blended together, and quicksilver is added to them, and the mass is stirred daily for some time. In the *second* preparation, deer suet and turbith mineral are mixed together and allowed to stand as in the first preparation; the same also with lard, powdered tuttey, and flower of brimstone. The ingredients of both preparations are then put into an iron pot and subjected to a gentle heat, and stirred daily for some time. Wood-sut is afterwards combined with the mass so prepared, and this is then ready for use. The proportions of the several ingredients are stated.

[Printed, 4*d*. No Drawings.]

A.D. 1760, December 11.—N° 757.

WRIGHT, Henry.—"A new medicine which he calls caryo- " philius regius, or royal clove drops, which are of the most " efficacious nature in the cure of pains in the stomach, shortness " of breath, coughs, hooping coughs, cold chills, fits, and the " worst symptoms of consumption, the same being found to be " superior to any medicine yet discovered for the above dis-

" orders." The remedy is compounded of the following substances :—The roots of "angl. hyspa" and elecampane, juniper berries, gum benjamin, liquorice root, camphor, confection of opium, stoned raisons, and rectified spirits of wine. The proportions of the several ingredients are given, but no details as to the preparation of the medicine.

[Printed 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 181.]

A.D. 1761, September 1.—N° 766.

JACKSON, Thomas.—"A certain powerful specifick, which, " from the superior qualities to anything yet discovered, I had " nominated the Imperial lotion, the virtue whereof, by repeated " experiments, had proved effectual in the immediate cure of any " infection or injury received from persons afflicted with the " venereal disease or disorder, which the chymical lotion or preparation is calculated to extract." The medicine is prepared as follows :—Mild sublimated mercury and the "sal vitrioli" are added to a quantity of the decoction of (lignum sanctum) guaiacum, and when this is reduced to one half by boiling it is then fit for use. The proportions of the ingredients are given.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 132.]

A.D. 1762, May 21.—N° 773.

LOBB, Theophilus.—"A tincture for family use, to preserve " the blood from siziness and a saline scorbutic acrimony, and " for maintaining the appetite, digestion, strength, and chearfulness of the body, which in a long and large experience has " proved of great service in rheumatic and gouty cases, and " against other pains of the head, stomach, bowells, back, and " limbs, and against weakness and lowness of the spirits, &c." The remedy is compounded of the following substances :—The roots of gentian, and golangals, cubebs, grains of paradice, Virginian, snake root, red saunders, gum myrrh, leaves of common wormwood, sweet spirits of nitre, and rectified spirit of wine. A separate tincture is made of each of the medicinal substances which is kept in a jar, the mouth of which is tied over with bladder and leather. The ingredients in each vessel, having received additional spirits of wine, are digested for some time without the application of heat, the jars being daily shaken. Each tincture is then filtered and still kept in separate bottles. The same quantities of spirits of wine which were originally poured upon the ingredients are again put to them, and the processes described in the first instance are repeated. All the separate tinctures—save the red—so produced are added together, and are put into a barrel with a further quantity of the sweet spirits of nitre; and the required standard of colour is imparted by means of the red tincture. The liquor is afterwards bottled and fit for use. The different proportions of the substances employed are given.

[Printed, 4*d*. No Drawings.]

A.D. 1762, August 20.—N° 779.

RYAN, JOHN.—"New and particular medicine, which I calls "compound solution or essence of minerals, or Doctor Ryan's "white drops, which are the most safe and certain cure for every "species of scurvy, leprous and scrofulous disorders, they being "the most perfect solution of minerals ever yet discovered; "transparently miscible with water, a certain criterion for all "compleat solutions of resinous bodys, gums, and medicinal "fossils, a specific quality peculiar to these drops, the want of "which miscibility renders the virtues of all other pretended "solutions and antiscorbutick remedies hitherto invented so "confined and ineffectual." The substances composing the "medicine are, ant. comp. nitr. tart.," sea salt, water, and spirits of wine.

[Printed, 4*d*. No Drawings.]

A.D. 1762, November 11.—N° 781.

JUNIPER, JOHN.—"A new medicine called essence of pepper-"mint, which contains all the virtues of that plant, and is an "excellent remedy in cholicks, retchings, sickness, and all "disorders arising from flatulency, and in other disorders "therein mentioned;" to obtain the medicine dried pepperment is distilled, and the oil which comes over is collected. This is afterwards put into a retort and purified with an alkaline salt, water being put to it, and gentle heat applied to aid the digestion and distillation. The oil so obtained is mixed with a quantity of alcohol. Distillation is again repeated, assisted by the water bath; to that which comes over alcohol and the extract of common mint are added, and the whole are again distilled in a "tall bolt head," by means of heat. When cold it is filtered and fit for use.

[Printed, 4*d*. No Drawings.]

A.D. 1763, July 29.—N° 791.

FORDYCE, WILLIAM.—"A new medicinal composition, called "the stomach pill, whose power far exceeds that of any medicine "hitherto discovered in curing all disorders of the stomach and "bowells, where there is a deficiency of bile and no inflammation." The medicine is formed by the combination of rhubarb, extract of flowers of chamomile and of gum myrrh, socotorine aloes, grains of paradise, and oil of chamomile, the whole being made into mass by means of the syrup of sugar. The proportions of the ingredients used are given.

[Printed, 4d. No Drawings. See Rolls Chapel Reports, 6th Report, p. 158.]

A.D. 1764, November 30.—N° 820.

NORTON, JOHN.—"A new invented medicine, which I had stiled "Maredant's drops, being an antiscorbutic, and operating insen-"sibly on the patient, exceeding all other medicines yet found out "for the cure of the scurvy, leprosy, evil, or struma, fistulas, piles, "ulcers, and all other disorders arising from a foulness in the "blood, as many hundreds of his said Majesty's subjects had then "already experienced." The substances used in the preparation of the medicine are, calomel, gentian root, ginger, orange peel, and cochineal.

[Printed, 4d. No Drawings. See Rolls Chapel Reports, 6th Report, p. 133.]

A.D. 1765, February 7.—N° 824.

WILKINSON, JOHN.—"Preparing medicated baths, to be con-"structed on frames for floating on the river Thames or elsewhere, "adapted to the cures of many diseases, not to be remedied by "other known means; together with floats made of cork, in form "of seamen's waistcoats or otherwise, to be used there or else-"where to prevent drowning; as also by seamen or persons using "the sea in time of shipwreck or other accidents on water, in a "manner never practised by any other person or persons whatso-"ever until the discovery thereof made six years ago by me." The floating baths are directed to be so constructed that the bathers may either bathe in separate baths, or the river water may be allowed to pass through them, a constant fresh current being kept up; or the baths may be prepared with mineral or vegetable infusions, sea water, or with any other substances.

The jackets are formed of cork, cut into convenient pieces for being attached to or connected with jackets intended to serve the purpose of floating.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 134.]

A.D. 1765, June 5.—N° 828.

COLLETT, JOSEPH.—"Leather catheters and bougies." Suitable leather is cut into pieces, and steeped until it becomes sufficiently elastic. It is then stated to be bored "for catheters" with an engine for that purpose, and afterwards turned in a lathe to the required sizes; the tubes have then affixed to them caps and wires, and being cased over and polished, the process is completed. The bougies are made in the same way, but are not mounted with caps and wires.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 134.]

A.D. 1765, December 3.—N° 835.

WILLIAMS, THOMAS.—"New-invented restorative medicine, " called essence of flowers of benzoin, or pulmonic drops." To prepare the medicine, fresh flowers, of a white colour and fragrant, obtained from the East India gum benzoin, saffron, and "the purest " parts of the best American pines," are digested for some time in a spirituous menstrum, a proper degree of heat being applied; and when purified in the usual way, the medicine is fit for use.

[Printed, 4*d* No Drawings. See Rolls Chapel Reports, 6th Report, p. 134.]

A.D. 1766, April 15.—N° 845.

FOSTER, ABRAHAM.—"A composition which after a few hours " taking is an effectual and certain cure for the ague, and which " I call Foster's compound." To make the medicine, brandy, finely-powdered cochineal, and saffron are put into a bag, and to the liquor which is pressed out cinchona is added. The medicine is then bottled and fit for use.

[Printed, 4*d*. No Drawings.]

A.D. 1766, August 13.—N° 857.

SUTTON, ROBERT, and SUTTON, DANIEL.—"Their new in- " vented specific medicine, that will certainly produce a favourable " species of the small-pox."

[No Specification enrolled.]

A.D. 1766, September 13.—N° 860.

DICKINSON, Robert, and SEDGIER, Henry.—"A bedstead "which is of a quite different construction to any hitherto made, "and would be of great use and conveniency to such of his said "Majesty's subjects as should be so unfortunate to be confined "to their beds of sickness." This consists first of a part "to "which is fixed a false headboard by two, three, or more hinges, "that falls back as it is forced or raised up to heighten the back "of the settee, and again into its place when it is let down to form "the bedstead, is fastened by two strong hinges to the second "part (which is screwed down to the sides of the bedstead, and is "forced or raised up by two quadrangles, with teeth cut out of a "solid bar of iron that runs across the bedstead and is received "into a box consisting of two plates of iron screwed together, "separated by two shoulders the thickness of the quadrangle, "through which it passes into the sides of the bedstead, where "it dies and receives a winch on one or either side, to force "or wind it up and let it down by, with a stop on each or "either side to fix it to the height the person in bed chooses to be "raised. The second part is entirely fixed to or upon the sides "of the bed" by "four or any other proper number of screws, to "which is added and fastened by two, three, or more strong "hinges, the other or third part of the bottom, falling within the "sides of the before-mentioned bedstead in order to form the seat "(to which on each side is fastened a spring ketch that lets into "the sides of the bedstead by forcing it with your hand, and "fastens it compleatly when raised up to form the bed), to which "is nailed, screwed, glued, or fastened, a sacking, which goes or "is received over a roller that is fixed within the foot rail of the "bedstead into feet-posts or pillars by two iron gudgeons drove "into the roller and fixed in by two ferols, which are received "through two plates of iron into the posts or pillars aforesaid, "and is fixed unto another roler on to which it is wound, that is "fixed unto the sides of the bedstead by two gudgeons, fastened "as per description of the first roler, only the gudgeons which "goes into the sides of the bed are longer than the gudgeons of "the first, and are square or of a triangle form, and go through "iron plates in order to receive the wynch which winds it up, to "which is fastened or fixed at either or each end a round plate of "iron adjoining to the ferol, cut full of teeth, commonly called a "burhead, which, when the lower part comes to be wound up,

" fastens and stays it by a key or catch that is fastened to the " sides or side of the bed, and falling into the teeth. There is " fixed to the first part before described, to be raised by the quad- " rangle in or on each side of it, two iron screw staples with eyelot " holes, that receives two hooks fastened to a close elbow or elbows " that has a tennant which is received into a mortass in the second " part, which is stuff'd and covered; the furniture, bed, mattrass, " and bedding compleating the settee."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 135.]

A.D. 1767, February 11.—N° 868.

HOPKINS, JOHN, BECKETT, THOMAS, and HENDERSON, CHRISTOPHER.—" A new-invented medicine, prepared in part " chemically, and compounded of several ingredients, now com- " monly called by the name of the Beaume de vie." The medicine is prepared by infusing the best cordial, balsamic, and stomachic ingredients in a " cephalic menstruum" for several days, afterwards adding to it a proper proportion of hepatic, deobstruent, and nervous ingredients, and a " quantity of strong " mountain wine;" all which are digested together for a considerable time in a water bath. The balsamic liquor, after being strained, is fit for use.

[Printed, 4*d*. No Drawings.]

A.D. 1767, September 8.—N° 882.

DOMINICETI, BARTHOLOMEW.—" Discovery or invention of " the method of making the arbitrarily heated and medicated " salubrious baths, pumps, and stoves, both moist and dry, and " a variety of fumigations from herbs, seeds, roots, flowers, gums, " minerals, and other drugs, and an infinite variety of machines " for conveying and applying the efficacy of the above drugs and " minerals to the different parts of the human body, according to " the nature of the disease."

This consists, first, of a bath standing about one foot from the floor of the room, in which is slung a platform which is ten inches higher at the head than at the foot, and on which is laid a mattrass and pillow of hair or various herbs. The bath has folding doors, and if these are open, curtains, which draw and shut " in the " steams," which steams are controlled by a regulator and two cocks, so as to be " altered or totally changed to hot or cold." A stream, regulated by a stop-cock, may be made to fall from a height of fifteen feet on any part of the body from a pipe above. By the side of the bath is a trap door, which admits of an assistant or surgeon to descend three feet, so as to be more convenient for any kind of manipulation on the patient. If necessary, the baths are emptied in a minute, and filled at a minute's warning, either with water or medicated water of any kind, and with or without minerals, and for this purpose a boiler is described, divided "into " two equal parts, one for emollients, the other for aromatics," which are conveyed to the bath by pipes. There is also a mineral boiler, which supplies water to the baths. A cistern, divided into equal parts, supplies soft and spring water to the boiler and bath. Near to each bath is a stove, so contrived as to be "instantly " regulated to any degree of heat, and at the same time filled " with steams arising from such compositions as may be thought " most likely to contribute to the immediate relief and speedy " cure of the several complaints for which they are prepared." " These steams and effluvia are prepared in boilers and heaters, " so contrived that each may be used separately, or communicate " its steam or dry fume to the stove, or mixed with that of two " pots which are placed under the stove," and the vapours from which pass through the stove under a chair in which the patient sits, which chair is described. The patient has an oil-cloth covering let down upon him, and through which his head passes. Other stoves, designed chiefly for dry fumes, resembling the first, are described. There is a machine called a horse, for the patient sitting upon when being fumigated upon various parts of his body, and machines for fumigating various parts of the head and body.

[Printed, 1*s*. Drawing.]

A.D. 1768, August 13.—N° 902.

APPLEBY, THOMAS.—" A balsam for the cure of and bringing " away sand and gravel lodged in the bladder and kidneys, the " cure of green wounds, and several other disorders incident " to human nature." The medicine is prepared as follows:— Rectified spirits of wine, gum guaiacum, myrrh, balsam of tolu and storax, benzoin, the American wild vine, mastich, the root of the anchuse or alkanet, and saffron, are digested for a considerable time in a sand heat, and the liquor, which is afterwards passed off, is fit for use.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 135.]

A.D. 1768, December 7.—N° 909.

NORRIS, Thomas.—"New invented medicine or drops for the " cure of fevers and all inflammatory disorders; that the experi- " ence of its sovereign efficacy, not only in the above disorders, " but in many chronic disorders are indisputable, and what must " render this medicine particularly serviceable is that it operates without the least violence or disturbance to the animal economy, " even to the most delicate constitution." "Antimon. cand " hung. rs. vitr. antim., Ᵽpt. s. a. sine ulla additione, fiat " tinctura mediante acet. vin. s. a. Edulcora tincturam ad for- " mam ol. rs. sp. vin. aq. pluv. lign. ust. terr sal petro q. s., fiant calcinatio, vitrificacio, digestio, evaporatio, dulcficatio, " distillatio. & fermentatio, s. a. Mediante igne."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 160.]

A.D. 1769, December 23.—N° 948.

LERAT, Charles.—" A certain powder called the poudre " unique, of a particular effect to purify the human blood, and " cure the rheumatism, scurvey, jaundice, and all disorders " arising from a foulness of blood." The preparation of the medicine is as follows:—Antimony and mercury are dissolved in aqua regia or nitro-muriatic acid, and when common salt is added, the mixture is put into a bottle to be well mixed; it is then put " in a pipkin," and washed many times in clean water; when dry, spirits of wine are thrown upon it and set on fire, during the time being constantly stirred; after the addition of the "salt of " cinnamon," wine is again poured upon the ingredients, and set on fire, and the same process is repeated several times. When dry, the powder is fit for use.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 137.]

A.D. 1770, November 16.—N° 971.

VALLOTTON, Peter.—"New manufacture of stockings or " hose, gloves, mittens or mitts, night caps, socks, coats, waist- " coats, and breeches pieces, or pieces of any length, or any " other articles of goods of any kind, to be worked or wove " upon a common stocking or other frame or knit with needles " peculiarly adapted for the wear of persons afflicted with the " gout, rheumatism, palsy, or other lameness, weakness, or

" infirmity." The garments above named are made "of waste " silk or other silk carded and spun separate from or with rabet " or coney wool, hare wool, beaver wool, Vigonia wool or Spanish " wool, cotton wool, or camells' hair, or any other kind of wool, " furr, or hair of any other animal or beast, down of birds or " fowls, as also tow, hemp, or flax, mixed, carded, and spun " separately or with each other, and afterwards thrown or " twisted together with a thread of wrought silk, or thread of " any other material to strengthen the same." "Also the " various articles above specified" may be made "of common " materials and in the usual manner, with the addition of laying " upon the needles of the stocking frame or knitting needles " with the hand brush, comb, heckle, or any other instrument, " such kinds and sorts of wool, hair, down, and unwrought " silk, in every particular as mentioned above, for the purpose " of making a knap with or without or on both sides of the " above articles particularly enumerated."

[Printed, *4d.* No Drawings.]

A.D. 1771, August 10.—N° 996.

BRAND, Robert.—" A new instrument or machine, which I " call a traverse elastic truss or bandage, for the relief of persons " of either sex or any age, who are afflicted with ruptures either " in the groin or navel, and which is of greater relief to any " person afflicted with such disorders, and sits with greater ease " on the patient, and greatly varies from any instrument or " machine hitherto invented for that disorder." Steel is used for the making of the traverse elastic truss and navel bandage. It is stated to be just made red hot, and then put into cold water, by which it is rendered extremely hard. The hardness is then diminished by the metal being held over a fire. When the proper temper is obtained, the steel apparatus is then rivetted to its proper cushion plates, which are of iron. That for the groin rupture is composed of cork, covered with flannel and leather; that for the navel rupture has two springs attached to a small piece of iron, which is connected with a piece of bend leather, and the latter is covered with shammy leather, and completes the cushion of that bandage.

[Printed, *4d.* No Drawings.]

A.D. 1772, February 12.—N° 1005.

CHASE, SAMUEL.—"New invented medical cure for almost all "scorbutick disorders, and their natural eruptive consequences, "but more particulary for ulcerated and other sore legs, so fre"quently complained of in this kingdom, arising from the before"mentioned primary causes; which said medical process consists "in giving, by regular turns, an electuary, mixture, and drops "internally, and by the application of a digestive liniment and "cerate externally.

The anti-scorbutic electuary is composed of the "cinnabar of "antimony," purified salt of nitre, powdered jalap, compound powder of "cuckow-pint," the black sulphuret of mercury, cream of tartar, "linitive electuary," and a sufficient quantity of simple syrup to make the whole into an electuary.

The anti-scorbutic mixture is formed of the infusion of senna, peppermint water, common manna, and the compound spirit of lavender, all which are mixed together.

The anti-scorbutic drops are compounded of antimonial wine and sweet spirit of nitre.

The cerate is made of hogs' lard, olive oil, yellow wax, carbonate of zinc, and red lead.

The digestive liniment and cerate is composed of white wax, spermaceti, olive oil, red sulphuret of mercury, and powder of red precipitate, which are mixed together. In these several preparations the proportions of the substances used are given.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 138.]

A.D. 1772, March 17.—N° 1008.

BURROWS, JOHN.—"A medicine entirely new in these his "Majesty's kingdoms, and not before practised therein by any "person, commonly called or known by the name of Velno's "vegetable syrup, and of making and manufacturing the same "from several rare and valuable vegetables and drugs." The medicine is formed by infusing for some time the "milder purging "plants with a proper quantity of the sal tarturi," to which are added the "anti-venereal and anti-scorbutic plants" bruised, and the juice of dandelion; the various ingredients are then digested for some time at a moderate heat. The clear liquor is poured off and clarified, after which it is boiled to a proper consistency and strained, and is a syrup fit for use.

[Printed, 4*d*. No Drawings.]

A.D. 1772, December 17.—No 1029.

WARREN, Richard.—"A certain medicinal and chemical composition, from divers salutary ingredients, called or intended "to be called the volatile essence of lavender." To form the medicine, a "fixed alkaline salt" and a "crude salt," and sal ammoniac, with alcohol, are put into a glass retort to which a receiver is attached, and distillation is effected in a water bath. To the spirit which comes over the essential oil of lavender is added, the whole being again subjected to distillation, and the spirit ultimately collected is the "volatile essence of lavender."

[Printed, 4*d*. No Drawings.]

A.D. 1773, January 18.—No 1030.

COLLINS, Benjamin. — "A cephalick snuff, being a remedy "for most disorders of the head, which it purges, strengthens "the nerves, and revives the spirits, &c." The best Virginia leaf tobacco is dried and made into snuff, and to this is added "one twelfth part of the finest roseat rappee snuff and a small "quantity of macabaw from the West Indies; the herbs betony, "eybright, margoram, thyme, syriac, flowers of marum syriac, "equal quantities, dried and made into a fine powder; to which "add one-twentieth part of the leaves of assari, dried and "powdered in like manner; also East India cloves thoroughly "dried and powdered, one-fiftieth part; essential oils of cinnamon, nutmegs, lavender, and balsam of Peru, a small "quantity of each." The whole are well mixed and pressed into an earthen pan, and after four days add to it "eau de luce, "in quantity one ounce to a pound of the above snuff, together "with orange flower, lavender and rose water just sufficient to "make the whole a little moist; then put it into bottles for use, "of which a pinch may be taken at any time for the disorders "above mentioned."

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 1 (*second series*), p. 249; Rolls Chapel Reports, 6th Report, p. 138.]

A.D. 1773, January 22.—No 1031.

HEMET, Jacob.—"An essence of pearl and pearl dentifrice." To form the essence of pearl the following subsances are used:—amber, alcohol, benzoin, "native mineral alkali, the odorous particles of the flowers of oranges and roses extracted by watery

" infusion," an "essential and vegetable salt," "vitrifiable earth," and orrice root, the fruit of the aromatic aracus. These different ingredients are digested, and that which comes over by distillation is the essence of pearl.

The pearl dentrifice is made by thoroughly incorporating together the insoluble particles which remain after making the essence, adding to them the aromatic substances mentioned above.

[Printed, 4*d.* No Drawings.]

A.D. 1773, March 5.—N° 1035.

IRWIN, James.—" A new method, never before used, of making " currant drops and lozenges of fruits, which being of great effi- " cacy in the cure of sore throats, obstinate coughs, and hoarse- " nesses, will be of great benefit to his Majesty's subjects." The directions for making the drops, &c., are, that ripe black currants, are to be boiled for some minutes in any pan that is not of copper, stirring them during the time. They are then passed through a hair sieve to prevent the seeds going through; and after sugar is added to them they are boiled until they attain a proper consistency. The mass is spread on plates, and when cold and dried is cut in square pieces for lozenges. The drops are made by being " dropped with a spoon."

[Printed, 4*d.* No Drawings.]

A.D. 1773, August 3.—N° 1050.

FAYNARD, James.—" His new invented powder, never yet made " public, for the immediate stopping all violent bleeding internal " or external."

[No Specification enrolled.]

A.D. 1774, September 1.—N° 1078.

HANNAY, Samuel.—(*Lord Chancellor refused to let this pass the Great Seal.*)—" Of his new invented medicine, consisting of " a liquid, which, by washing the part, in men, any time within " eight hours after coition, absolutely prevents the communica- " tion of the venereal disease, let it be of any degree or virulence " whatsoever."

[No Specification enrolled.]

A.D. 1774, November 25.—Nº 1089.

JAMES, ROBERT.—"Doctor James's analeptic pills, being a "sovereign remedy for rheumatisms, whether seated externally or "internally, for indigestions, crudities of the stomach from intemperance, loss of appetite, habitual costiveness, giddiness in the "head, troublesome flatulence in the stomach and bowels, and "cholicks thence arising, as also for gouty habits where the "stomach and head are affected, and for all kinds of bilious "disorders, lowness of spirits, and nervous complaints, as well as "in those disorders occasioned by a sedentary life." The pills are compounded of the pill rufi, gum ammoniacum, and the fever powder of the patentee. See No. 626, Old Law. The two former are directed to be dissolved "in a cave under ground fur"nished with the conductors of electrical fire." When dissolved they are mixed with the powder and made into pills by a solution of gum arabic.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 33 (*second series*), p. 17. Carpmael's Reports on Patent Cases, vol. 1, p. 367; Parliamentary Report, 1829 (*Patent Law*) p. 201. Merivale's Reports. vol. 2, p. 446. Webster's Patent Law, p. 129, Case 64; and Rolls Chapel Reports, 6th Report, p. 139.]

A.D. 1776, February 22.—Nº 1116.

WAKEFIELD, ROBERT.—"Art of making his medicinal and "compound powders for the assistance and relief of young chil"dren afflicted with gripes and convulsions." The ingredients which enter into the composition of the powder are sal polychrest, "pulvis epilepticus," the powdered root of contrayerva, powdered cinnamon, and the "powder of purging sugar."

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 162.]

A.D. 1776, March 19.—Nº 1121.

RADLEY, WILLIAM.—A purging carminative tincture "for the "cholic, gripes, gout, rheumatism, jaundice, and dropsy." The roots of jalap and ginger, and orange peel, are infused in brandy, and afterwards subjected to distillation. The proportions of the ingredients used are stated.

[Printed, 4*d.* No Drawings.]

A.D. 1777, June 13.—N° 1158.

GRUBB, Robert.—" A certain medicine called the Frier's drops, " for the cure of the venereal disease, scurvy, rheumatism, stran- " guary, and gleets, without an electuary or pills, in every stage " of the complaint, or without any confinement or particular regi- " men." To make the drops rectified spirits of wine are added to calomel, " purging antimony," guaiacum wood, balsam of Peru, extract of hemlock, white sugar candy, oil of sassafras, tartaric acid, and gum arabic.

[Printed, 4*d.* No Drawings.]

A.D. 1778, October 22.—N° 1199.

GILLANDERS, Francis.—" A method of covering artificial " teeth, and also decayed natural teeth and gums, with a compo- " tion or substance that will admit of being coloured, so as to " imitate the natural teeth and gums, and that will not corrode, " stain, or lose its colour in the mouth." The patentee speaks of covering artificial teeth, made of ivory, bone, or of any other substance, with " vitrified enamel," but the nature of this or his mode of applying it is not stated.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 164.]

A.D. 1779, January 8.—N° 1206.

GREENOUGH, Thomas. —" A very excellent remedy for " sprains, bruises, wounds, and many other complaints, called " by me Samaritan water." The remedy is made by putting " regenerated tartar " into a glass retort to which is attached a receiver, and pouring upon it concentrated sulphuric acid. Gentle heat is applied and continued until nothing further will come over. To the liquor obtained by distillation, camphor is added, and both are digested, aided by the application of moderate heat, until the liquor is fully saturated with the camphor. The digestion is carried on after the addition of saffron; and when this is supposed to have yielded its anodyne properties, the liquor is poured off and allowed to stand several days perfectly at rest. The clear liquor is then put into a vessel with a metallic substance compounded of pure lead and copper, and the whole is digested with a moderate heat until the liquor is considered as fully saturated with the metallic matter. Properly diluted it is now fit for use. The proportions of the ingredients used are given.

[Printed, 4*d.* No Drawings.]

A.D. 1779, January 20.—N° 1208.

BACON, John.—"New invented medicinal preparation for the "more safe and speedy cure of intermitting and nervous fevers "and consumptive disorders." To make the medicine, antimony is purified by fusion and sublimation, and is then united to a "metallic substance." After being reduced to powder a "vegetable menstrum" is poured upon them, and by means of a gentle heat the tincture is extracted. The essence obtained by further distillation is mixed with the mass remaining in the retort "with a bezoar," and "as much balsam" as is sufficient to form the whole into pills.

[Printed 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 164.]

A.D. 1779, February 11.—N° 1,211.

BUZAGLO, Abraham.—"A muscular strength and health "restoring exercise by the means of machines, instruments, and "necessaries for practising the same."

These are, 1. A square fixed on the wall with the handle moving round to assist the joints.

2 and 3. Two flat boards both alike, one side higher than the other, to eradicate the gout.

4 and 5. Two flat boards both alike, the upper part wood the lower part lead, to assist the muscles.

6 and 7. Two flat boards both alike, the upper part wood the lower part sand bags, for exercising the muscles.

8. An iron instrument to cure weakness in the back.

9. A flat piece of wood higher on one side than the other to correct the gout.

10. A long pole to hold by.

11. Lays on the floor or is raised up to assist the sides and hips.

12. A board lies on the floor to assist the calves.

13. A crane with pulleys on which are handles to aid the muscles of the shoulders.

14 and 15. Two long pieces of wood, each with two shorter pieces fixed across them, for exercising the muscles of the back.

16. A long board same as 2 and 3, and for the same purpose.

17 and 18. Same as 2, 3, and 16.

19 and 20. Same as 9, for eradicating the gout.

21 and 22. Two small squares to correct gouty disorders in the ankles and knees.

23 and 24. Two sloaping boards for the same purpose as 21 and 22.

25 and 26. Two flat boards, higher one side than the other, for the like purpose as the four last.

27. "A rest bench for depositing the patient's body under the operation of cure.

28. An engine for removing pains on particular joints, consisting of a basin-shaped arrangement with handles.

29 and 30. Two flat boards similar to 2 and 3.

31. Flat board with ridges for correcting the gout.

32. " An elastick board to exercise after the gout and prepare the limbs for further exercise."

33 and 34. "Two different square boards higher one side than the other to correct particular joints under special circumstances : "

35. Two boards joined together to assist the joints.

36. A short pole to assist in the use of 14 and 15.

37. Two boards, joined together at one end so as to form an acute angle, to assist the hips and ankles only.

38. "A double sloaping instrument to assist the ankles and " knees."

[Printed, 10*d*. Drawing.]

A.D. 1781, February 16.—N° 1278.

WILSON, Thomas.—"A medicinal composition, which after " much experience hath been found to be an infallible remedy for " agues and intermittent fevers, even in the most obstinate cases, " where the bark and every other medicine hath proved ineffec- " tual." The medicine is formed by burning the "centaury" to ashes, boiling these for several hours in water, and afterwards evaporating the liquor to dryness. The residue is calcined, and during the process constantly stirred. Cobalt, in fine powder, is sublimated, and on being added to it the two are melted together and subsequently boiled in water. A decoction of "sanders " red " is mixed with them and completes the operations.

[Printed, 4*d*. No Drawings.]

A.D. 1781, March 9.—N° 1283.

WARREN, Richard.—" Preparing leather gloves with flowers, " fruits, and vegetables, so as to preserve the hands and arms " from chopping, and the other effects of cold." To effect the purpose here mentioned almonds and orris root, reduced to a fine powder, are mixed together, and each pair of gloves turned inside out receives a layer of this compound preparation, the uppermost pair, as they are piled one above another, being covered with the same. In this state they are left for some time. This process finished, the powder of orris root, the essential oil of roses, and the oil of jessamine mixed together, are applied in the same manner to the gloves, the latter remaining piled for a still longer period. Lastly, the essential oil of roses is added to well carded cotton, and this and the gloves are laid alternately, as previously described. After being in contact some time the gloves are ready for use.

[Printed, 4*d*. No Drawings.]

A.D. 1781, April 23.—Nº 1290.

SQUIRE, WILLIAM.—" A new constructed spring truss, for the " relief of persons afflicted with ruptures." The single truss for the groin is formed of steel which is perfectly elastic; it has a fixed pad or a pad that slides, which is readily adjusted to the part requiring the pressure. The double truss differs in no respect from the single, except that it has at each end a fixed or sliding pad. The truss for the naval is similary constructed. The springs are covered on the outside, and have a soft lining next the body. The trusses may be secured with a buckle or strap, but in most cases this is not needed.

[Printed, 4*d*. No Drawings. Rolls Chapel Reports, 6th Report, p. 165.]

A.D. 1781, May 9.—Nº 1292.

EVERS, WILLIAM.—" A certain machine made of copper and " iron and other metals, japanned or otherwise, as well for warming of beds, and giving and preserving warmth to those parts " of sick persons which are seized or afflicted with any disorder, " as for keeping victuals hot which are served up on dishes for the " table, and also of an entire new construction." This machine is made of two pieces of metal, round, oval, or square, oval is most useful for warming beds, they are of a convex shape and fastened at the edges. They " form in shape something like a bed " pan," in the top is an opening seven or eight inches diameter covered with a lid " hung by a joint on one side, and fastened by " a bolt and catch at the other, one end of which bolt extends

" into an handle to the machine, in which handle is a worm or " spring which causes the bolt to fasten the lid when pressed " down." "A knop" on the handle, communicating with the " bolt when pressed down, causes the lid to open. A spring inside the lid presses upon the heater of iron or any other metal heated red hot, while it rests upon a number of small plates of iron or other metal placed on their edges which rise about an inch from the bottom, and operate as conductors of heat to the bottom and sides from the heater, strong pieces of wire extend from the plates to a ring of iron on the top which the lid falls upon,

[Printed, *4d.* No Drawings.]

A.D. 1782, February 5.—N° 1318.

NAIRNE, EDWARD.—" New-invented and most useful improve" ment in the common electrical machine (which I call the insulated " medical electrical machine), by insulating the whole in a parti" cular manner, and constructing the conductors so that either " shocks or sparks may be received from them." The improvement consists in using "small glass tubes, or an electric, with a " very small quantity of coated surface, and by making the part " through which the shock is to be sent a portion of that electric " circuit. In all these cases the person himself may excite the " electric, and perform these various operations without any " assistance from another, if he chuses it."

[Printed, *4d.* No Drawings. See Repertory of Arts, vol. 7, p. 380.]

A.D. 1782, July 31.—N° 1334.

GALE, THOMAS.—" New-invented medicine or drops, called or " intended to be called spa elixir or Gale's spa elixir." The medicine or drops are as follows:—" R. fer. q. l.; cor, anima., " sp. vin. esse. tinc. anima: super: aq: nat:, sp. sal: q. s., " dissolve. digest, correct, evaporate, and extract the elixir S.A."

[Printed, *4d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 166.]

A.D. 1783, December 1.—N° 1403.

CORNWELL, BRYAN.—" The oriental vegetable cordial, and for " making and manufacturing the same from the most delicious " herbs, flowers, and roots." The medicine is compounded of " carduus, rue, balm, wormwood, mint, rosemary, 'dragons,' " angelica, 'salendine,' sage, pimpernel, maidenhair, pollypody,

" scabious, dittany, agrimony, burnet, sorrel, scurvy grass, ros solis " or sundew, pennyroyal, and lavendar cotton, flowers of mary- " golds, cloves, archangels, cowslips, lilies of the valley, camomile, " sclarea, sage, poppies, gillyflowers, and centaury tops; tormentil, " alecampane, snake root, anniseeds, and the seeds of carraway, " fennel, and coriander; ginger, nutmegs, mace, calamus aroma- " ticus," and to the foregoing are added green walnuts. The whole of the ingredients are infused for several days in ale, with which is afterwards mixed a greater quantity of brandy. When the liquor is filtered, distilled, and coloured with cochineal, it is fit for use. The proportions of the numerous substances employed in the making of the cordial are given.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 142.]

A.D. 1784, March 12.—Nº 1423.

MARTIN, Benjamin, senior.—" A medicine, called the antiper- " tussis, which is a most infallible cure for that dreadful disorder " the hooping cough, and all disorders of the stomach and lungs, " as well as being the best anti-scorbutic yet discovered." The first in the preparation is the solution of the sulphate of zinc in spring water, which is allowed, being stirred daily, to stand a considerable time in an earthen vessel. Afterwards Brazil wood, alum, cochineal, and spring water are mixed together in an earthen vessel, and are subjected to a gentle heat, being constantly stirred, until the liquor is very greatly reduced in quantity. When strained, a certain proportion of this is added to the solution of the sulphate of zinc, and is then ready for use. The proportions of the ingredients employed are given.

[Printed, 4*d*. No Drawings.]

A.D. 1784, November 15.—Nº 1454.

JAMES, Nathaniel.—" Spring trusses for ruptures on a new " construction, both simple, double, navel, side, and inguinal." The several trusses described in the specification are constructed on the same principle, varying only in form, and the pieces of which they are composed, are made to meet the necessities of each individual case. The single truss has two plates, the inside plate playing on double joint hinges, and between it and the outside plate is a spring rivetted to the outside of the latter, the effect of which is to keep up any degree of pressure that may be required.

The double truss has four plates and two springs, which act as in the single truss. The navel, the side, and the inguinal trusses are simply modifications of construction on the same principle.

[Printed, 4*d*. No Drawings.]

A.D. 1875, May 3.—N° 1476.

GODBOLD, NATHANIEL. — "The cure of consumption and " disease in the lungs, by him called 'Godbold's vegetable " balsam." The herbs of which this is compounded, are: thistles, mallows, milfoil, 'planton,' nattles, cowslips, 'buers,' 'pastory, aron wake, robin,' maidenhair, agrimony, peony, linaria, endive, 'clemont, mandinwort,' rosemary, rue, 'gibrumbeth,' costmary, fever-few, 'allkenkengy,' angelica, 'ringea,' wormwood, tormentil, senna, strawberries, red currants, black currants rasberries, plums, capsicum, 'ciceroy,' elderberries, banberries, garlic, 'mivabolano,' alecampane, betony, anniseeds, tamarinds, and bays. An essence is extracted by distillation from each of these, and is set apart preserved in syrup. The whole are afterwards mixed with gum dragon, gum guaiacum, gum arabic, and gum canida, and when dissolved in double distilled vinegar, storax, dissolved in spirits of wine, and oil of cinnamon are added to them, The balsam is then bottled, and after it has been kept some years is fit for use.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 171.]

A.D. 1785, July 16.—N° 1490.

LEWIS, THOMAS.—"A truss on an entire new principle, for the " cure of ruptures of all kinds." The construction of the truss is illustrated by diagrams, without the aid of which it is not possible briefly to describe it. The main features of it are, a cog or notched wheel, on which a spring operates, and thereby acts upon the plate, which regulates the pressure on the part of the body where it is required.

[Printed, 10*d*. Drawing. See Rolls Chapel Reports, 6th Report, p. 171.]

A.D. 1785, December 19.—N° 1516.

SEVERNE, JOSEPH.—"A remedy for the ague, which I call the " aromatic ague cake." A tincture is made from the bark called by the Indians querango, by means of spirits of wine, and is afterwards evaporated to the consistency of treacle. A certain quantity of this is mixed with powdered querango, cinnamon, extract of logwood, ipecacuanha, capsicum, gum tragaganth, and oil of carraway seeds. The ingredients are made into a paste with cinnamon water, and when dried this is fit for use. The proportions of the substances employed are stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 173.]

A.D. 1786, January 23.—N° 1522.

THOMPSON, John.—"Of his new invented medicine, which "he calls 'baume d'arquebusade concentre,' or concentrated "balsam of arquebusade, which is one of the greatest antiseptic "chymical preparations, and the most sovereign remedy ex- "ternally in the cure of fractures, dislocations, &c., gunshot and "all kinds of wounds, and internally, in the jaundice, and all "bilious complaints, the dropsy, gravel, and worms."

[No Specification enrolled].

A.D. 1786, February 7.—N° 1531.

CHASE, Samuel.—"A medicine, which I call a stomach drop, "it being singularly useful in all complaints in the stomach "arising from bile, indigestion, and all obstructions in the "bowels, which it seldom fails to remove." To make the medicine, gum myrrh is infused many days in French brandy, and shaken several times daily. A second infusion is made with brandy in the same way, and the following ingredients; saffron, galangale root powdered, cardamum seeds, cinnamon, long pepper, and ginger. Both infusions are afterwards mixed together. Socotorine aloes, dissolved in spring water by means of a gentle heat, are added to both infusions. The mixture, after being shaken, is allowed to stand for some time, and when filtered is fit for use. The proportions of the substances employed are given.

[Printed, 4*d*. No Drawings.]

A.D. 1786, February 21.—N° 1533.

WALKER, Adam.—"An empyreal air stove, for the purpose of "purifying the air of churches, theatres, jails, sick and all other "rooms and inclosed buildings." The repository for the heat, in size and form, is "governed by the external part of the stove, "and may be made of the same materials" as it, "or made of "metal lined with clay, &c.; an iron flue conveys the smoke to

" the chimney. " A retort vessell or bellied pipe," made of pipe or other clay, or glass, &c., the size depending upon the stove, and " the quantity of dephlogisticated air required, and even two, " three, four, or more retorts may be occasionally employed " together in the same stove at pleasure." These are placed " over, under, or beside the fire or heat." Pipes, which may be made of various materials, are attached to the upper end of the above vessels to convey the purified air to the top of the room or diffuse it through the room, or into any contiguous room in any direction or distance required. " In these pipes a belly or " cavity is formed to contain herbs, essences, vinegar, &c., to be " used as may be required." " To increase the draught of air " over the purifying ingredients, or to extract bad air from the " holds of ships, &c., conduct pipes may be affixed to the lower " end of the retort, and extend through the floors, decks, &c., " as convenience may require." " Into the retort vessell or " bellied pipe may be put nitre, minium, clay, potsherds, or any " other ingredients that produce dephlogisticated air."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 174.]

A.D. 1786, August 5.—N° 1554.

TICKELL, William.—" A new chemical medicine, which I call " spiritus œthereus anodynus, or anodyne œthereal spirit." Rectified spirit of wine and concentrated sulphuric acid, the latter being added gradually, are mixed together, and when cold are bottled, and laid aside for some time. A portion of this liquor is put into a retort, to which is attached a receiver, and by the aid of a moderate heat, distillation is carried on for a considerable time. To what remains in the retort, a certain quantity of the same liquor is added, and the same process is repeated. To the contents of the receiver rectified spirit of wine, in which the oil of juniper or camphor is dissolved, is added, and the whole is again distilled. That which is brought over undergoes another distillation; and when the impurities of the mixture in the receiver are removed, it is once more subjected to the same operation, aided by a moderate heat, and the result is the production of the " oleum " polychrestum verum," which, when freed from its acid, a specified quantity of it, mixed with pure spirit, forms the " anodyne " œthereal spirit." The proportions of the ingredients used are given.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 174.]

A.D. 1786, September 29.—N° 1558.

SMITH, Thomas.—"A new method or methods of applying "springs to saddles, stirrup irons, martingal rings, whips, "hunting caps, belt buckles, bridle bits, terretts for coach, "phaeton, or other kind of harness, squares for stable collar "reins, trusses or bandages for ruptures, and milking pails." Methods of applying springs to saddles, &c., are described. In reference to this subject, applying springs to trusses, &c., the following is the mode described :—"The bolster of this truss is "made with two brass or other metal plates, between which are "fixed two springs, which causes the bolster to expand. Under "the plate a piece of cork is fixed, and the whole together is "covered with leather; on the top plate is fixed an eye, to which "a strap is fixed, made as follows : a piece of narrow linen girth "web, which is covered with soft leather, which goes round the "hips, and is fixed to a stud in the upper plate; also another "strap is sewed to this strap, which goes between the legs, and "is fixed to another stud on the same plate."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 175.]

A.D. 1786, October 30.—N° 1566.

THOMPSON, John.—"An entire new medicine, called beaumé "d'arquebusade concentré, or concentrated balsam of arquebusade." The medicine is compounded of the juices of the following ingredients :—great white thorn apple, sumach, black hellebore, the great master wort, prickly rock asparagus, soap wort, female hawk weed, white flowered star thistle, sweet gum cistus, star wort, tyrian herb mastick, wild rock sage, wild marjoram, hart's penny royal, and the greater all heat. The juices of these are mixed together with the salt of soda and bullock's gall, and then are allowed to ferment. When the fermentation is completed, and the impurities have settled, the liquor is distilled in a sand heat, and the oily matters being separated from the water which has come over, are added to the residuum in the receiver, and evaporated to the consistency of honey, to which is added "camphor extracted from rosemary," dissolved in rectified spirits of wine. The mixture is then bottled, and subjected to a moderate sand heat for several days, being frequently shaken, and after it has been allowed to subside, that which is poured off is the "beaumé d'arquebusade." The proportion of the different juices used and of other substances is given.

[Printed, 4*d*. No Drawings.]

A.D. 1787, July 20.—N° 1615.

BAYLY, ANSELM.—"A new way or method of making elastic "girdles, bandages, or rollers, the most useful and convenient, to "prevent and relieve ruptures, fractures, sprains, and swellings "of every kind, and which is on an entire new construction." The specification states that the several articles mentioned may be made of knitted silk, cotton, thread, or worsted, and that "the "central and elastic machines" may be constructed of various metals, with wood, silk, and wool, in size and form according to the purposes required. Springs are spoken of, but their application is not pointed out.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 177.]

A.D. 1788, September 22.—N° 1670.

HOLLAND, GEORGE.—"A method of making stockings, gloves "with socks, caps, coats, waistcoats, breeches, cloaks, and other "clothing, and linings for the same, for persons afflicted with gout, "rheumatism, or other complaints requiring warmth, and for com- "mon use in cold climates, and for making false or downy calves "in stockings, a thing never before put in practice, and which "would be of great public use and utility." The materials used may be twisted silk, cotton yarn, flaxen or hempen thread, worsted or woollen yarn. The weaving is commenced in the common way, and having worked one or more courses, a coating is added in the following manner:—"Draw the frame over the "arch, and then bring wool or jersey, raw or unspun, upon the "beards of the needles, and slide the same off their beards upon "their stems, till it comes exactly under the nibs of the sinkers; "then sink the jacks and sinkers, and bring forward the frame, "till the wool or jersey is drawn under the beards of the "needles, and having done this draw the frame over the arch, "and place a thread of spun materials upon the needles under "the nibs of the sinkers, and proceed in finishing the course in "the usual way of manufacturing hosiery with spun materials." Hosiery may be coated with any of the different substances mentioned. False calves in stockings are made according to the same methods.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 15, p. 17.]

A.D. 1788, October 6.—N° 1671.

HOWE, THOMAS.—" A medicine for the cure of consumptions, " asthmas, coughs, and other disorders, called by me Howe's pec- " toral lozenges of horehound." Horehound and licorice root are boiled in water, until this is greatly reduced in quantity; when strained, honey and refined sugar are added to the decoction, which is boiled to the consistency of thick syrup. Afterwards, white sugar candy, powdered orris root, starch powder, mucilage of gum tragacanth, and "paregoric elixir," are mixed with a quantity of the syrup, and on the addition of white candy, the whole is beaten into a paste proper for the making of lozenges. The proportion of the ingredients used is stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 179.]

A.D, 1790, January 20.—N° 1724.

MANN, THOMAS.—" A certain instrument for the purpose of " assisting the human body in walking (and which I call an " artificial leg), after the loss of the natural leg by amputation " or otherwise, upon principles far superior to any other instru- " ment of the kind, both for use and ornament, being capable of " performing all the actions of a natural limb in all its joints, " namely, knee, ancle, and toes, as well in walking as in sitting " down and rising up, with greatest ease and safety to the " wearer, and of being applied both to above and below the " knee." To the socket enclosing the stump are three rings, two in front and one behind, into which are fastened elastic straps which pass over the shoulders. The thigh is slung to the socket by two pieces of leather; two slides attached to the socket work up and down in grooves on each side of the thigh piece. In the front part of the thigh piece are spiral springs " which give motion to " the leg after exercion of the thigh." These " are made of " twisted wire fastened above to the sockett (in which and the " thigh part is a small groove to receive them), and below to a " piece of leather joined to the patella." The " end of a steel " pin goes through the slides," and a repelling spring is fixed " in the end of each slide, which forces the sockett upwards, and " loosens the lock when the pressure is taken off;" a pin passing through the knee joint fastens it to the thigh part. The patella " slides (when the leg moves) in a groove made in the thigh, and " renders the knee shapely in all positions." The centre of the ankle joint is formed like the knee, and there are springs at the back and front, and "three spiral springs which act inside " the foot and keep the toes where there is no pressure upon " them," and other arrangements.

[Printed, 6*d*. Drawing.]

A.D. 1790, October 29.—N° 1779.

LUSCOMBE, Matthew. — "A new improvement on a com- " position called naval black varnish, for paying yards, masts, " blocks, and bends, anchors, &ca., of ships, and which improve- " ment is stated to serve in a very superior degree for the above " purposes, and also for ships' bottoms, and for laying on copper " for sheathing of ships, much better than any thing hitherto " known, and the oil extracted in the process is represented to " be of great use to preserve the health of man on board ships " and in hospitals, and in any situations by purifying the air." In a still of about nine hundred gallons is placed "as much thin " iron as it will conveniently hold, with eleven to fourteen " barrels of choice Stockholm tar, and about four hundred and " thirty gallons of oil of tar." The "distillation is begun, and " the first day from sixty to one hundred gallons of the fine oil " mentioned in the Patent is extracted, and so on from day to " day until the varnish be a fine japan black in color," until "it " be as stout, when cold, as you can just penetrate with your " finger." If it is then found not sufficiently black more oil of tar is "put in the still at discretion, and the process continued " until it become perfectly black in color and in size, as before " noted."

[Printed, 4*d*. No Drawings.]

A.D. 1791, March 18.—N° 1796.

STRINGER, Richard. — "A chemical preparation called " 'Stringer's essence of myrrh,' for curing the scurvy in the " gums, fastening the teeth, causing the gums (when parted from " the teeth) to grow up, and to give them a firmness and beautiful " red colour, and for stopping the progress of teeth which are de- " caying, and for preventing their being offensive." Gum myrrh, spirits of wine, rose water, orange flower water, "spirits of salts," burnt alum, and cochineal, are digested and filtered, and the liquor so prepared is the "essence of myrrh."

[Printed, 4*d*. No Drawing.]

A.D. 1791, May 11.—N° 1803.

DE CHEMANT, NICHOLAS DUBOIS.—"A composition for "making artificial teeth, either single, double, or in rows, or in "compleat setts, and also springs for fastening or affixing the "same in a more easy and effectual manner than any hitherto "discovered, which said teeth may be made of any shade or "colour, which they will retain for any length of time, and "will consequently more perfectly resemble the natural teeth "than any now made." To make the composition or mineral paste, fine white sand is well washed and dried, and Alicant barilla being intimately combined with it, the mixture is placed in an oven or furnace till it "is properly purified." A quantity of this is pounded and sifted, and being mixed with white and clean dried marle, and moistened in clear water, the ingredients are ground in a mill until they become fine, and when dried the paste is complete. Directions are given for making several inferior pastes. The plan which the patentee employs, to get an accurate impression of the cavity or cavities in the mouth, which have to be filled up, is obtained by using soft wax, and afterwards taking a cost of this in plaster of Paris, which becomes the mould, by which the mineral paste described is fashioned into the required form.

To make the enamel, lead and pewter are calcined together, and when reduced to a powder, and passed through a hair sieve, sand and barilla of Alicant previously sifted, are mixed with it, and the several ingredients are put into a crucible, to be properly baked in an oven or furnace. A portion of the substance so proproduced is cleaned and pounded fine, and is then added to spermaceti, lead, and borax, and the whole is put into a crucible "under the oven." Afterwards it is cleaned and pounded, and mixed with red lead, and being moistened with water, is ground in a mill, and this completes the operation for making the enamel. Directions for the application of it are given.

To make the springs for fastening whole sets of teeth, gold, of a certain purity, is made into wire of the required strength, and when heated to redness in the fire, after passing it through a mixture of common water, and aquafortis, it is twisted "round a "mandrel" to the thickness it is necessary to make the spring. The hinges to which it is connected are also made of the same kind of gold, and soldered to the gold plate, adapted to the form of the mouth. The proportion of the ingredients used in the processes described is stated.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 6, p. 379.]

A.D. 1791, October 18.—Nº 1832.

STONE, WILLIAM.—"A new method of applying the heat "arising from ovens in which coke is burnt or made to the dis- "tillation of volatile alkali, the evaporation of saline solution, "the excication of chrystalline, and the sublimation of sal-am- "moniac, and a variety of other purposes."

The patentee describes the capacity and form of two coke ovens which are to be built, having a wall in common, and a communication, which may be closed or opened at pleasure. Each oven has a vaulted roof, which is pierced on either side or behind with several holes, on which iron or copper cylinders are laid containing the chemical materials which have to be acted upon by the heat transmitted to them. Care is taken that this shall not be in excess. The ovens are variously modified in form or construction, to secure greater capacity for chemical action. One or more chambers are built in connection with corresponding holes, and are covered with plates of iron, copper, tiles or bricks, so that a platform is obtained for placing upon it the evaporating vessels. Contrivances are also mentioned for preventing the waste of superfluous heat.

[Printed, 4*d*. No Drawings.]

A.D. 1792, February 4.—Nº 1848.

SPILSBURY, FRANCIS.—"A certain medicine called "Spilbury's "antiscorbutic drops, which has proved an efficacious remedy for "eradicating the most inveterate scorbutic disorders." The medicine is formed of antimonial powder, the muriate of mercury, "antimon. muriat.," cantharides, trifol. palud, socotrine, aloes, the roots of sarsaparilla, columba, gentian, orange peel, cascarilla bark, sliced guaiacum wood and sassafras wood, the seeds of sweet fennel, juniper berries, sulphuric acid, rectified spirits of wine, pure water, and acetic acid.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 185.]

A.D. 1792, May 15.—Nº 1878.

MASON, ROBERT.—"A medicine for the effectual extirpation of "worms, and their cause, from the human body, in persons of

" all ages, as also for the relief and cure of divers other com-
" plaints and diseases." The ingredients used are powdered jalap, powdered coriander seeds, powdered scamony, powdered box leaves "dulcified mercury," powder of ipecacuanha, black sulphuret of mercury, powdered ginger, carraway seeds, "lenitive
" electuary," wheat flour, and treacle sufficient to make a dough, which when cut into proper pieces, and baked, is fit for use. The proportion of the substances used is given.

[Printed, 4*d.* No Drawings.]

A.D. 1792, July 24.—N° 1900.

RYMER, James.—"A cardiac and nervous tincture." This is compounded of the extract of camomile flowers, peppermint, lavender, rosemary, coltsfoot, dandelion, sage, aniseeds, carraway seed, lesser cardamums, castor, nutmegs, guaiacum, myrrh, sassafras, ginger, saffron, bark, rhubarb, snake root, camphor dissolved in rectified spirit of wine, Madeira wine, and French brandy. The ingredients are digested several weeks and then strained. The tincture when strongly impregnated with carbonic acid, is fit for use. The proportion of the substances used is given.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 145.]

A.D. 1792, October 18.—N° 1912.

SLEATH, John.—"An improvement in the manufacturing
" springs for trusses, and the coverings thereof, and which method
" of manufacturing springs may be applied to steel backs and
" other useful purposes." The improvement in the spring consists in tinning them, so that they may not rust; and the same is done to steel, and steel backs applied to other purposes. The novelty which is claimed for the covering of the spring and pad-plate, is so securing them by screws, or other modes, that they may be readily separated and fresh covering put on both.

[Printed, 4*d.* No Drawings.]

A.D. 1793, January 15.—N° 1930.

GRUBB, Robert.—"A complete and efficacious medicine for
" the speedy cure of certain grevious maladies and diseases inci-
" dent to the human body, therein called and distinguished by

" the name and description of the human restorative or nervous
" corroborant drops, for strengthening and invigorating the
" animal fluids, repairing the injured tone of the solids, correcting
" feminine irregular profluira, natural debilities or weaknesses in
" either sex, eradicating melancholy, hypochondriac affections,
" and every impediment of the animal functions, thereby restoring
" and conserving health and vigour of body and serenity of
" mind." The medicine is composed of balsam of tolu, gum lac,
" styrax, moschus, ambergris, gum kino, oil of cinnamon, rectified spirit of wine, balsam of Gilead, balsam of Peru, gum guaiacum, and castor. The proportion of the ingredients used is stated.

[Printed, 4*d*. No Drawings.]

A.D. 1793, April 1.—Nº 1944.

GULLETT, CHRISTOPHER. — "A safe means and beneficial
" remedy for expelling the gout from the head, stomach, and
" vital parts of persons so afflicted, assuaging the paroxysms even
" in the most dangerous cases, and afterwards curing such, as well
" as other gouty persons, without any medicine, plaister, or other
" such application whatever, either internal or external." This consists in applying " lightning, otherwise called electrical fluid or
" electricity."

1. When there is gout in the head and stomach, the cylinder and conductor of the machine being so placed as to facilitate the operation, a wire is attached to the brass ball at the end of the conductor for conveying the electric fluid to the head of the patient; and the other end of the wire is twisted round the glass handle, having a brass ball screwed into it, the handle being held by the operator to the part of the head where the greatest pain is: another wire is fastened to the knob or crook at the back of the cushion behind the cylinder, and the other end of the same wire, to which a brass knob is fixed, is laid on the breast of the patient When the machine is turned, the electric fluid passes to the head and thence to the breast, where it is attracted by the brass knob and conveyed by the wire to the cushion, and thus a circuit and current of electric fluid is uninterruptedly maintained. During the action of the machine the cushion must continue to be insulated by the glass stem.

2. When the head only is affected the fluid is passed, in the same way, from one side of the head and temple to the other, and

in different, opposite, and oblique directions, in order that the head may be thoroughly acted upon.

3. When the object is to influence the stomach, the fluid, in like manner, is applied to the neck and back, and drawn off at the breast, or the operation may be reversed by shifting the balls.

4. When the gout is seated in the hands and feet, a wire from the conductor is applied to one hand and drawn off to the other hand or foot, or vice versâ.

5. At the end of every operation the fluid should be applied "to the head," and drawn off "below the knees."

6. "For dissolving, reducing, and dissipating chalk stones and "enlarged joints;" "the fluid is passed through the affected parts, "suppose the middle joints of the fingers, from the outside of "the fore-finger to the outside of the litle finger, or vice versâ, "as previously stated. In all cases it is desirable that the patient "should be insulated to secure the full action of the electric "fluid."

[Printed, *6d.* Drawing. See Rolls Chapel Reports, 6th Report, p. 187.]

A.D. 1794, May 13.—Nº 1989.

FERRYMAN, Robert.—"A bathing machine either fixed or "moveable, that may be used as a hot or cold bath, in salt "or fresh water, and in all weathers, calculated for the better "accommodation of invalids and timid persons, and to remove "the possibility of any accidents from rough weather or in-"experienced guides; together with such a cock to the boiler as "will prevent any waste of hot water, a stop to the door to guard "against the mischiefs that frequently happen from the wind "shutting them with violence, and a scraper to the outer door "necessary to keep the interior parts of the bath perfectly free "from dirt, and to remedy the many inconveniences which have "arisen from the scrapers at present in use." This consists first, of a domed skylight supported by four hollow columns; part of the floor is made to sink, around three sides of which is a railing, about six feet high, four ropes, iron rods, or chains, fastened to each corner of the sinking floor pass through the hollow columns, over six pullies and again over a large roller with a large wheel with teeth and a catch. A scale is fastened to this large roller, by a rope or chain, "to receive a weight or counterbalance near "the weight of the sinking floor and the person or persons

" bathing, in order to ease the labour of the attendant." A ladder, which rises and falls with the floor, is hinged on to it. There is a seat for one or more persons. The attendant puts a proper weight into the balance scale, then takes off the catch, and by turning the large roller lets out the ropes or chains and lowers the floors with the bathers to a sufficient depth into the water, and turning the large wheel the reverse way raises the floor gently up again. To convert this into a hot bath, a large vessel moves freely in a groove under the sinking floor, above this vessel is a boiler fed by a pump from the sea or a reservoir. The large vessel is brought under the sinking floor by means of a roller. Great exactness may be required in the degree of heating the bath, and for this purpose two new arrangements of moving the plugs in cocks by means of a lever working upon a pin are described, and a means of keeping the floor " as free from mire as possible " by means of a moveable scraper and brush on a box; and also, " the noise and jar arising from the violent shutting of the door " by wind or other means," is prevented, by means of a bar moving freely in the front edge of the door, and jointed at the bottom of the door, to another bar laid in a groove in the bottom of the door, moving in a centre at the middle of the door. The end of this bar next the hinged end of the door is bent downwards and enters a semicircular plate laid in the floor, with holes at small distance from each other to admit the downward projecting end of the bar, and when the entrance of this projecting end into one of the holes is effected, the door is securely staid.

[Printed, 6*d*. Drawing.]

A.D. 1794, August 7.—N 2005.

BENTLEY, Henriette Caroline.—" A bed for fractures, " gout, rheumatism, lying-in women, and bed-ridden persons, " which may be made and the linen changed without incommod- " ing the patient." This does not " interfere with a feather bed " and bedstead, &c., as in common use, but consists of frames to " be used either therewith, or by being affixed to any frame of " wood, beam, or ceiling, by means of certain machinery." The afflicted person is suspended " above the surface of the feather " bed on a straining frame of four sides " made of wood or metal, " divided near the middle of each side or at any place the " workman shall think necessary to suit the convenience of the " patient," by a double hinge of some metal, or it " has a small

" frame annexed to its sides in such manner as to raise the " patient's head and alter and relieve the position in the manner " and for the purpose of a bed chair " or it may be removed when necessary or agreeable. The frame is covered with " ticken sack- " ing." Cords attached to it pass over four pullies fixed to the four corners of the frame or tester of the bedstead. "There is " a wheel and axis, on the end of which is fixed a roller round " which the cord or cords wind up;" arrangements are made " to " prevent the weight of the patient from accelerating the motion " too much in descending," and also " to prevent or stop the " straining frame at any point of suspension," &c.

[Printed, 6*d*. Drawing.]

A.D. 1794, September 29.—N° 2012.

GARRATT, Francis.—" Preparing the cocoa nut with other " ingredients for the purpose of making the same into cocoa, " which I call 'the Queen's cocoa.'" Dried cocoa nut, orange peel, lemon peel, cassia, Peruvian bark, are pulverized and mixed well together. Proportions are given, but it is said they may be varied as shall appear " necessary and most beneficial to " the health of weak and consumptive persons, although I have " not here particularized such alterations and variations."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 188.]

A.D. 1794, September 30.—N° 2013.

YELDALL, Anthony.—" An acromatic belt which, being ap- " plied to the human body, has effected most singular cures in " gouty, rheumatic, and other cases."

" The belt," is described as " a metallic and chymical composi- " tion, acromatically prepared for emitting as much magnetic " effluvia as is possible." The nature of the metallic and chemical preparation is not stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 188.]

A.D. 1795, May 7.—N° 2049.

SIBLY, Ebenezer.—" The reanimating solar tincture." This is compounded of Canada balsam, olibanum, anise-seeds, mountain damson, chamomile, aromatic caryophyllus, nutmeg, galangale, " acorus," juniper berries, sage, rosemary, gentian, " savibucus," aloes, comfrey, valerian, sassafras, horseradish, leaves of gold, white sugar, saffron, and rectified spirit of wine. The ingredients are digested and afterwards subjected to distillation. The proportions used are given.

[Printed, 4*d*. No Drawings.]

A.D. 1795, May 12.—Nº 2050.

LAMBE, THOMAS.—"An improved truss for persons afflicted "with the bubonocele, and other ruptures." The Specification states, that the truss is made of steel, and so tempered as to be perfectly elastic. It goes three parts round the body, and at the head of it are rivetted three brass buttons; and under the head are rivetted both a centre and counter spring. In the head there is, likewise, a screw which goes through, fastening the counter spring, and which screw on, and being turned round "brings "down the counter spring and slide, and of course is a security "to the rupture, and easy to the pressure." The main feature of the mechanism is the firmness which it gives to the head of the truss in its application to that part of the body where the pressure is required. The invention is explained by several diagrams.

[Printed, 6*d*. Drawing.]

A.D. 1795, July 29.—Nº 2058.

STANTON, JACOB.—"A new machine for the relief of persons "labouring under the misfortune of a fractured leg or thigh, "which I call a leg and thigh machine." For a fractured leg two sides are "curved to fit the leg," and attached to a curved bottom piece, so that when buckled up by two straps the whole forms "nearly a circle;" a piece the shape of the foot is fitted on to one end to act as a support to the foot; the whole is mounted on a telescopic stand, particularly described, so as to be capable of being moved upwards, downwards, or in a lateral direction, and retained in the position required by screws. To this machine is attached by joints another part for a "fractured thigh." It is constructed much in the same way as the part for the fractured leg, but without a stand, and it has arrangements by which it can be extended or otherwise.

[Printed, 1*s*. Drawing.]

A.D. 1795, October 22.—Nº 2070.

WILLSON, JAMES.—"A mode of preventing in a material "degree the effects of moisture on the human body, and of

" facilitating relief in inflammatory and spasmodic complaints " arising from it and other causes." This invention consists as follows:—First, the making of an impervious sock, to wear over the stocking or next the skin. It is formed of the intestine or membrane of any animal, and a last is fashioned to facilitate the process and give the required shape. The socks may be varnished to render them perfectly impenetrable to moisture without or from within.

Second, the application to the body or any part of it of atmospheric air, the vapour of water, or any substance that may be combined with it, or the fumes of dry substances alone. When the whole body is to be acted upon without interfering with the natural breathing of the patient, the latter is enveloped in an impervious sack or covering which is tied closely round the neck; and the vapour or fumes which it is intended to employ, are transmitted to and confined within the covering as long as it may be deemed necessary. If a part only of the body is to be so influenced, it is enveloped in the same way and by a material of the same kind.

Third, the application of ether to any part of the body, which is effected in the same manner as above stated, the novelty of the invention in this case consisting in recovering the ether for subsequent use. The instruments required for the accomplishment of these several objects are clearly described in a plate which accompanies the Specification.

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 12, p. 1.]

A.D. 1796, March 1.—Nº 2093.

BOWMAN, MICHAEL.—" A truss for the prevention and cure " of ruptures on an improved principle, having a jointed and " spring pad, and elastic under strap, and circular band, instead " of the iron and steel, or other metallic circular bands in use, " and which would fit persons of different size, and that the truss " would do equally well for ruptures on either side." The spring pad of the truss is made of three plates of steel, or of any other metal, in form and size according to the exigencies of the case. The outer plate is united by a joint or hinge to the middle plate; and on the side of the middle plate, " at the end next the joint," the two plates are rivetted together, leaving the other end of the middle plate loose, so as to work on the opposite side of the outer plate. The plate next the cushion is united to the middle plate by a hinge or joint, at the reverse end of that which is connected with the outer plate. The band or strap which goes round the body has inserted at the free end or middle of it rows of elastic metallic wires or small springs, in order that it may stretch or contract in the various movements or states of the body Several modifications of the truss are mentioned.

[Printed, 4*d.* No Drawings.]

A.D. 1796, May 24.—N° 2110.

GOLDFINCH, William.—" An improved truss for the cure " and prevention of ruptures." The construction of the truss is explained by several diagrams. The pad of the truss is triangular, made of cork, and stuffed with wool, and has likewise five brass studs for the attachment of leather straps. The body band or belt has inserted into the middle of it several springs, and also the under strap which is connected with it.

[Printed, 6*d.* Drawing.]

A.D. 1796, June 28.—N° 2121.

CHING, John.—" A medicine for the destroying of worms, " which may be administered without prejudice to the consti- " tution of the patient." The Specification describes two kinds of lozenges. The ingredients which enter into the composition of the first are :—Calomel, white sugar, crocus, and water. The crocus is boiled in water for several minutes, it is then strained, and the several substances are mixed together and made into a mass, which is rolled to a proper thickness for the making of lozenges. The second kind is made of the extract of jalap, calomel, white sugar, and water sufficient to make the whole into a mass, which is dealt with as in the first preparation. Both kinds of lozenges are to be dried in the sun.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 21 (*second series*), p. 141; and Rolls Chapel Reports, 6th Report, p. 146.]

A.D. 1796, September 9.—N° 2135.

LOWNDES, Francis.—" New invented machine for exercising " the joints and muscles of the human body." This consists of a frame in which are treadles or treading boards and springs, to give and apply motion and exercise, voluntary and involuntary, to the limbs, joints and muscles of the human body. There are an upper and a lower crank, the upper for the hands, the lower for suspending the treading boards; outside the frame on the end of each crank is a fly wheel with grooves in their edge to admit of a cord or band to put them in motion. On the lower wheel "is a handle to give motion to the machinery, if "necessary."

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 6, p. 88.]

A.D. 1797, January 24.—N° 2157.

SHELDRAKE, TIMOTHY, the Younger.—"New invented method of curing all the deformities of children or others, which "arise from or are connected with distortion, in the form or "combination of bones that exist in the deformed part." This consists first, "in curvature of bones a small force should be at "first applied, and afterwards gradually increased to the utmost "extent that can be applied without injury to the soft parts which "lie under the instruments."

Second, "in improper combination of bones, or defect of muscular action, the force to be used should be something more "than the parts affected would exert if in their natural state."

"In carrying out the above different arrangements, the con- "tinual, repeated, and varied application of a spring or springs to "be constructed, adapted, and applied with bandages and by "instruments in such manner that the spring or springs which "constitute the efficient part of such applications shall be con- "stantly acting to correct the disease, and shall have their powers "varied, modified, and increased as circumstances shall require."

[Printed, 8*d*. Drawing. See Rolls Chapel Reports, 6th Report, p. 192.]

A.D. 1798, March 10.—N° 2221.

PERKINS, BENJAMIN DOUGLAS.—"Discovery of a certain art "of relieving and curing a variety of aches, pains, and diseases "in the human body, by drawing over the parts affected or those "contiguous thereto, in certain directions, various pointed metals, "which, from the affinity they have with the offending matter, "or from some other cause, extract or draw out the same, and "thus cure the patient." The metals which are used are combinations of copper, zinc, and gold; or iron united to a certain proportion of silver or platina. The tractors may be formed with one or more points.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 2 (*second series*), p. 179; and Rolls Chapel Reports, 6th Report, p. 147.]

A.D. 1798, March 30.—N° 2226.

JOHNSTON, ROBERT.—" A medicine which I call improved " essence of mustard." To form the essence, the whole plant and root of the white and brown mustard, and white and brown mustard seed, are mixed together, and the essential oil extracted by distillation, is added to the essential oil of juniper, and alcohol, and the whole is put into a retort, and by means of a gentle heat is subjected to distillation, and that which comes over is then kept in closely stopped bottles. Cloves are digested in alcohol as long as they impart any flavour to it, and after being filtered, distillation is carried on until the liquor thickens; distilled water being added to it, a precipitate occurs, which is made into cakes and dried with a gentle heat. Gum guaiacum is digested in alcohol, and distilled as in the foregoing instance, and the precipitate which is obtained is dealt with in the same manner. A certain quantity of the preparation of cloves, of the preparation of guaiacum, and of the essence of mustard, is mixed with the balsam of Peru, balsam of Tolu, kermes mineral, and with powdered castor, and these several ingredients are made into a hard mass, and afterwards into pills. An essence is formed as follows :—Brown mustard seed is mixed with essential oil of turpentine hot, and when cold, water being put to it, it is distilled, and that which comes over is mixed with animal oil, oil of hartshorn, freed from colour and smell by repeated distillation, camphor, essential oil of rosemary, essential oil of cloves, oil of lavender, and the essence of mustard. The proportions of the substances used are stated.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 9, p. 165.]

A.D. 1798, November 20.—N° 2271.

SMITH, NATHAN.—" A new way and method of constructing " or making a vapour bath or vessel of different sizes and shapes, " by uniting thereto and using therewith a certain mathematical " instrument or machine called an air pump or exhauster, for " curing, healing, and relieving persons afflicted with the gout, " putrid and inflammatory sores of various kinds, with which the

" human body may be affected." A vessel is made to receive the whole human body, or any part of it, as the case may require, into which a tube passes, furnished with a stop cock, the other end of the tube being connected with the boiler. One or more air pumps are fixed to the vessel used as a bath, and when this is filled with steam, the air pump or pumps are worked to exhaust, wholly or in part, the contained air, in order that "the elastic " force and power " of the air within the human body may expel the matter which occasions any existing disease.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 1 (*second series*), p. 411; and Rolls Chapel Reports, 6th Report, p. 194.]

A.D. 1798, November 27.—N° 2275.

GODBOLD, Nathaniel. — "Invention for the cure of con- " sumptions and disease in the lungs, and for the cure of the " scrofula and gout, by him called 'Godbold's vegetable balsam, " Godbold's vegetable ointment, and Godbold's vegetable pill." The balsam is compounded of the following ingredients :—Thistles, mallows, yarrow, plantain, nettles, cowslips, "buers," pastory, aron, wake robin, maidenhair, agremony, peony, "limaria," endive, calamins, " maudim wort," rosemary, rue, " gibrumbetti," alecast, featherfew, "allkenkengy," angolica, ringea, wormwood, tormentil, horehound, coldsfoot, senna, strawberries, red currants, black currants, rasberries, damasons, capsicum, ciceroy, elderberries, banberries, garlick, alecampane, betony, milfoil, aniseseeds, slows, hips, peaches, mulberries, buckthorn-berries, tamarinds, and bays. Essences are extracted from these vegetable substances singly, and preserved in syrups; they are afterwards mixed with gum dragon, gum guaiacum, gum arabic, gum Canada, and venus turpentine; the gums being previously dissolved in distilled vinegar, and further mixed with storax dissolved in spirits of wine and oil of cinnamon. The balsam is bottled, and when kept for some years is fit for use. The vegetable pill and vegetable ointment are made from the foregoing herbs and gums from which the syrup has been extracted, by these being "resolved into a substance which produces the said " pill and ointment."

[Printed, 4*d.* No Drawings.]

A.D. 1799, January 29.—N° 2291.

BARTON, Joseph.—" A medicine or chemical preparation which " I denominate compound concentrated fluid vital air, of great

" use in the cure of all putrid diseases, feverous, scrofulous, or " scorbutic, as well as asthmatic, paralitic, and nervous com- " plaints; and founded on the same basis of discovery, another " preparation which I call aeriated, preventative fluid, as a pre- " ventative from putrid, morbid, or virilous infection; and also " founded on the same basis of discovery, aeriated liquid balm " for the preserving and beautifying the skin." The "concen- " trated fluid vital air" is formed by disengaging oxygen from substances in which it abounds. To the retort into which the substances are put to be acted upon by heat, a tubilated receiver is attached containing water, and a second one is adapted to this, into which alcohol is gradually introduced. The gases generated in the retort are oxygen and carbonic acid. The oxygen passes through the water in the first receiver and then into the second, and combining with the spirit forms the "liquid of compound " concentrated fluid vital air." The carbonic acid is mixed with and retained by the water in the first receiver. "Aeriated pre- " ventative fluid" is made in the same way as to apparatus, but instead of spirit in the second receiver, the oxygen is combined with essential oil and distilled water. "Aeriated liquid balm" is also made by the same process, only into the second receiver, flowers of roses, jessamine, et cætera; or expressed, as well as essential oils of sweet smelling vegetables are introduced instead of alcohol.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 1 (*second series*), p. 20; and Rolls Chapel Reports, 6th Report, p. 147.]

A.D. 1799, April 10.—N° 2303.

BRODUM, WILLIAM. — "A medicine which I denominate " 'Doctor Brodum's botanical syrup," for the cure of scorbutic, " leprous, and scrofulous complaints, and various other diseases " to which the human body is subject; and also a medicine " which I denominate 'Doctor Brodum's nervous cordial,' for " the cure of consumptive, nervous, and debilitated constitutions, " and people who have been in hot countries, and many other " complaints to which the human body is likewise subject." The " botanical syrup" is made of sassafras, guaiacum chips, burdock roots, liquorice roots, red bark in roots, elm bark, cochineal, beet-roots. These are mixed together and boiled until the syrup is greatly reduced in quantity. Steel wine is added to it and completes the preparation. The proportions of the ingredients used are given. The "nervous cordial" is compounded of the tincture of bark, tincture of cardamums, aromatic tincture, nutmeg water, and spirit of lavender, the whole being mixed together. The proportions in this preparation are likewise stated.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 6th Report, p. 148.]

A.D. 1799, April 23.—N° 2309.

SIMPSON, Robert.—" An improvement instrument for extract-" ing teeth in a perpendicular direction." The instrument is explained by various diagrams. Different sized claws are used according to the nature of the case. They are made of steel, and consist of two levers connected by a strong joint, to which is adapted a spring which by its lateral pressure approximates the lower extremities of the claws to each other, thereby holding the tooth firmly. The instrument which extracts is formed of two blades of unequal length, the shorter one furnishing the fulcrum, on which the lever rests, and so acts upon the claw that the tooth is drawn perpendicularly from its socket by the turning of the ivory handle of the instrument.

[Printed, 6*d.* Drawing.]

A.D. 1799, May 28.—N° 2315.

BROWNE, Henry.—"A method of making and preparing " extract of zinc." "The extract of zinc is made or composed of " the vegetable or animal acid saturated with the oxyde of zinc." This may be obtained from many substances. The acid which is used may be made by acetous fermentation, as common vinegar, and being saturated with the oxyde of zinc, the "extract of zinc" is produced.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 16, p. 237.]

A.D. 1800, March 31.—N° 2387.

SAVIGNY, Horatio John.—" An instrument to be used in " surgical operations called a tourniquet, for the purpose of more " effectually than has hitherto been done the hindering and stop-" ping of effusion of blood in cases of gun-shot and other bad " wounds and fractures affecting or befalling the limbs of the " human body." The instrument is composed of two plates, a screw, a roller, bandage, and sharp points in the upper plate to retain the bandage when the required pressure is secured. The upper plate, made of brass, has its sides turned down to give it strength and form a frame for the roller. Into the centre of the plate a screw is inserted, and passes into the centre of the lower plate, which is applied to the limb or part of the body where the compression is needed. At the end of the upper plate, opposite the sharp points, there is an opening for the bandage to pass through, and where it is strongly sewed. A compress is likewise described, made of cork, covered with leather, and "having on "its flat surface, at each extremity, a loop sewed across, by which "it is always retained in a longitudinal position upon the "bandage, and slides upon it till fixed at any desired point."

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 14, p. 228.]

A.D. 1800, August 2.—N° 2432.

LENA, Innocenzo della.—"A certain medicine called flogis-"tical and fixed earth of Mars, or powder of Mars." "Mineral "earth of iron," copper, crude antimony, and "mineral salt," with a quantity of urine, are put into an unvarnished vessel, and when this is hermetically closed, it is buried a considerable depth in the ground for several weeks, screened from the rays of the sun and rain. The vessel is then taken up, and its contents are exposed in dishes to the rays of the sun, protected from excessive heat and rain. After being so exposed for some time, they are washed in distilled water at intervals of three or four days, urine and water being added to them after each operation. The matters are afterwards interred as in the previous case, and nearly for the same period. On being taken up, they are washed, as already described, only at longer intervals. They are again buried in the ground for a shorter time, and are subsequently washed at longer intervals, during which they are to be exposed to the sun and kept from rain.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 149.]

A.D. 1800, August 21.—N° 2440.

EGG, Joseph.—"Discovery of an entire new method of bending "steel without the assistance of heat, which may be applied to "the manufacturing of surgical instruments, and to a variety of "other useful purposes where bent steel and steel springs are "necessary." The process consists in taking a piece of steel of the temper of a sword blade, placing one end against the body, the other end being held by the hand and bent over a circular piece of steel or iron, "moving it backwards and forwards as may "be necessary to vary the blows, which should be struck in a "parallel direction with the centre of the circular steel" with a hammer, the head being in the form of a chissel, which, by the cut or impression made upon the steel spring, it being bent at the same time, may be adapted to a rupture truss, or any other use requiring a similar shape.

[Printed, 4d. No Drawings.]

A.D. 1800, November 15.—Nº 2448.

POTTS, James.—"An artificial arm and leg upon a new or "improved construction." "A box or tube made of bend "leather is fitted to a wooden joint several inches thick, in which "there are stops to prevent its movements going beyond a certain point, and a lock which fits in to the under lock of the "knee, a piece of wood, when stuffed after the form of the "natural leg, the lower end having a bird and ball which are "inserted into the brass sockets of the wooden foot furnished "with screw nails and nuts. The toes of the foot are also jointed "and are capable of motion." The artificial leg is stuffed in the usual manner to imitate the natural leg, and when the amputation is above the knee "is secured by a strap to the body, which "strap is fastened at the back of the leg and passed over the "opposite shoulder." When the amputation is below the knee, the construction of the ankle and foot is exactly the same. The artificial arm, hand, and fingers are made on the same principle.

[Printed, 6d. Drawing.]

A.D. 1800, November 20.—Nº 2452.

SIGMOND, Joseph.—"A preservative lotion and dentifrice "called British imperial lotion and dentifrice, for preserving and "beautifying the teeth and gums." To make the lotion, willow bark and Peruvian bark, bruised small, are soaked for some time in "Clifton waters," and with a quantity of the same waters are distilled twice. Turkey gum, myrrh, gum lac seed, gum mastick, and ambergris, well bruised, are dissolved in a quantity of Riga balsam and rectified spirits of wine, assisted by a gentle heat for a fortnight. When the mixture has been allowed to settle several weeks, it is strained off and diluted with the distilled preparation of bark, Spanish honey of roses being added to it, and it is then bottled and fit for use. The imperial dentifrice is compounded of water dock, orris root, willow bark well dried, magnesia, Dutch rose pink, dragons blood, and armenian bole, each being separately reduced to a fine powder. They are then, with the addition of the oil of rhodium, mixed together, and after being several times sifted, the dentifrice is fit for use. The proportions of the ingredients employed are stated.

[Printed, 4*d*. No Drawings.]

A.D. 1800, December 17.—N° 2457.

GIBBON, MARTHA.—" A certain new stay for women and " others." The stay consists of a front and a back part " exactly " to suit the form of the human body;" the " front part should " reach to the bottom of the abdomen, the back part propor- " tionally low, or to any depth that may not incommode the " wearer when seated; they are put together and fastened at " each side with laces and metal, and other hooks and eyelets " or strings." This stay, among other purposes named, answers for a truss.

[Printed, 6*d*. Drawing.]

A.D. 1801, June 5.—N° 2511.

LANE, TIMOTHY.—" A method whereby measuring glasses may " be rendered very accurate by a means differing from any at " present in use in the exact compounding of medicines, and for " other purposes where correct measures are wanted." The weight of a given quantity of distilled water is to be ascertained in troy grains, whether of wine or beer measure, so that by addition or division " the proper proportions of all the graduations " requisite for any measure may be known," having weights and scales adapted to the various purposes, in troy grains, and parts of a grain. " To measures having a large surface, the surface is " needful to be attended to, the inaccuracy arising from thence " is to be corrected by marks added to direct the eye to the same " level as when they were first graduated. When made with " glass (two surfaces being seen through glass containing trans- " parent fluids) divisions are to be made corresponding with the " upper and under surfaces, if required. When lines are required

" for additional accuracy, the marks will serve as a guide whereby " they may be described." When glass is not proper for graduated measures, other substances may be used.

[Printed, 4*d*. No Drawings.]

A.D. 1801, June 18.—Nº 2514.

BARTLETT, Thomas.—" New and useful improvements in the " construction of elastic trusses for ruptures." The improvement is stated to consist in connecting the head of the truss to the circumference spring by means of a hinge, and by annexing to the plate of the pad a steel spring, the lower end being fastened with a screw, while the upper end acts against the hinge, and closes or expands according to the degree of pressure that may be made against the truss. By this contrivance the lower end of the pad is pressed gently against the rupture, and yields to easy movement of the body.

[Printed, 6*d*. Drawings.]

A.D. 1802, July 14.—Nº 2634.

BARCLAY, William.—" A certain medicinal compound called " the Reverend Mr. Barclay's antibilious deobstruent pills, which " in their use, had proved far superior to any medicine yet dis- " covered for the safe and effectual expulsion of the bile and " bilious obstructions, so fatal in their effect to mankind in gene- " ral." The medicinal compound is formed of simple colocynth pills, resin of jalap, soap of almonds, extract of guaiacum wood, tartar emetic, essential oil of juniper berries, essential oil of carraway seeds, and the essential oil of rosemary; which ingredients are mixed together with a sufficient quantity of the syrup of buckthorn berries to form them into a mass proper for making the pills. The proportion of the substances used are given.

[Printed, 4*d*. No Drawings.]

A.D. 1802, August 30.—Nº 2644.

BARRETO, Joseph de Oliveira, and BARRETO, Mary de Lima.—" A new method of treating and curing of ruptures." The ointment is composed of incense, "alemecago," turpentine, balsam of capivi, and white wax. The incense and the "alme- " cago," reduced to a fine powder, are added to the turpentine and capivi, being repeatedly stirred during several days. When the wax is melted, the ingredients being mixed together, are placed in a proper vessel on the fire for a short time and well stirred. After some days they are again treated in the same manner, and the ointment is then fit for use. It is spread on leather of the size required, and this is firmly secured in its situation by a truss.

Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 2 (*second series*), p. 256; and Rolls Chapel Reports, 6th Report, p. 201.]

A.D. 1802, October 30.—N° 2653.

THOELDEN, Augustus Frederick.—" Certain mechanical " apparatus for supporting the human body, or any part thereof, " more especially during the time of repose, and for other bene- " ficial purposes." To give rest or an easy motion to the whole body, the frame or bed which is formed for the purpose is suspended from the ceiling, and in order that it may be " swung in " all directions, after the manner of a pendulum, with regard to " its center or centers of suspension," or have motion upwards and downwards; a spring in the form of a bow is interposed between the centre or centres of suspension, and the bed. One of its moveable extremes is fixed, " namely, either the crown of the " bow or the middle point of its string, to the upper hook or " place of suspension, and I suspend the bed itself to the other " moveable extremity, namely, the middle point of the string, or " the crown of the bow, as the case may be." To enable the person in the bed to produce the different motions described, a pulley is fixed, " at or near the said center, through which a cord " is passed, having one end thereof attached to the bed itself, and " the other at liberty to be drawn by the said person or assistant." Further contrivances are mentioned by which a part of the bedding, with the patient, may be raised, and a support given to him like the back of an easy chair; or a portion of the bedding may be depressed, allowing his legs to have vertical position, resting on a footboard. The principle of suspension which is here explained, is variously modified, so as to be applicable to broken or diseased limbs or parts of the human body.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 2 (*second series*), p. 104.]

A.D. 1802, December 9.—N° 2667.

BEER, Willam.—" Certain new and improved medicines, and " methods of administering the same, for the more effectually and

“ expeditiously curing the gout, rheumatism, scurvy, leprosy, “ scrofula or king's evil, palsy, blindness, asthmas, consumption, “ epilepsy, Saint Anthony's fire, jaundice, rickets, piles, dropsy, “ hystericks, contusions and bruises, sore legs, fevers, pleurisies “ agues, and all other diseases arising from a vitiated habit, ob- “ structed secretions, and redundance of humour, part of which “ medicines I denominate ‘Doctor Beer's reanimating vital “ fluid.’” This is composed of the compound tincture of cinchona, the ammoniated tincture of valerian, bran, hemlock, oil of anise-seed, nutmeg, camphor, hyssop, wine, æther, vitriol, and water. This diaphoretic medicine consists of mithridate, conserve of roses, mucilage of gum arabic, the fresh root and bark of the mezereon, water, oil of anise-seed, antimony, cinnamon water, nutmeg, liquor of ammonia, spirits of wine, bile, and peppermint.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 6th Report, p. 151.]

A.D. 1803, March 23.—Nº 2691.

CLARK, ROBERT.—“Certain new improvements in the construc- “ tion of a truss to be worn in case of rupture, by means of which “ the pad or bolster of the truss will always keep its place, notwith- “ standing any motion of the body or limbs of the wearer.” The advantages claimed for the invention are stated to be three :—

First, the plate fixed on the body spring has a circular motion round its centre, by which the pad is properly adjusted to its required bearing.

Second, the pad possesses also a sliding motion, by which it is firmly held in its position, whatever may be the motions of the body.

Third, “the application of the lever to the instrument, and “ which, with a screw adjustment, produces a pressure on the pad, “ which can be increased or diminished at pleasure.”

The body spring has its buckle and roller at one end, and a strap at the other, to secure the instrument to the body. The circular plate is attached to the body spring with a screw and collet; and two bars are likewise fixed upon it, edgewise, and parallel to each other, “to either end of which the rest of the “ apparatus may occasionally be fixed.” There are slits near the circumference of the plate which allows the circular motion describ [illegible] ewing the bottom of the lever, one end of it is raised and the other depressed, which depression, by acting on the spring regulates the pressure of the pad to any required degree.

[Printed, 6*d*. Drawing.]

A.D. 1803, May 23.—N° 2705.

ROCHE, JAMES.—" An external application for the cure of the " hooping cough, chin cough, fixed coughs, and all other com- " plaints, disorders, affections, or diseases of a similar nature." The medicine is compounded of oil of elder, red rose leaves, cammomile flowers, oil of carraway, oil of rosemary, powder of cochineal, and the root of alkanet. These ingredients are simmered for a considerable time in an earthen vessel over a slow fire, and when pressed and strained the liquor is fit for use. The proportions of the substances used are given.

[Printed, 4*d*. No Drawings.]

A.D. 1805, March 26.—N° 2831.

BRANDON, RICHARD, the elder.—" Invention or composition " from British herbs and plants for the cure of the evil, scrophula, " scurvy, leprosy, gout, and rheumatism, and which I have deno- " minated and called ' Brandon's British constitutional pills and " ' liquid and botanic ointment.' " The composition is formed of alkanet, " alhoof," allheal, black elder, common elder, angelica, garden orrack, wild and stinking orrack, archangel red white and yellow; asparagus, artichokes, ashtree, avens, " baum," " Barbary," barley, baytree, red beets, " Brittany water, Brittany " wood," birch tree, beech tree, briony, burdock, fennel, colesfoot, blessed thistle, cammomile, carots, carraway, cellendine, chickweed, clary, " clowns wound wort," comfrey, cowslip, heartsease, daisy, dandelion, " devilsbit," " deeks," thyme, duckweed, " great round " leaved deek," " dropt wort," eyebright, " featherpin," " fluellin," foxglove, " humitory," five fingered grass, groundsel, garlick, ground ivy, hemlock, henbane, hyssop, horehound, houseleek, horse raddish, horse parsley, juniper, lavender, white lilly, red lilly, liquorice, mallows, marjorum, marygold, mint, mustard, oats, onions, cow parsnip, pennyroyal, plantain, " pilewort," rosemary, rue, sage, wood sage, " tavary," shepherds' purse, " sow thistle," " southerend wood," " sea holly," English tobacco, garden tansey, " lady's thistle," tormentil, vervain, " vervine," wallnut, " worm- " wood woody," and nightshade.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 7th Report, p. 189.]

A.D. 1806, March 21.—N° 2919.

CLOUGH, Henry Gore.—"Certain improvements in the "instruments or apparatuses commonly called trusses, which are "used for compressing and supporting such parts of the human "frame as are or may be ruptured, or disposed to protrude." Instead of the usual bandages and fastenings of trusses, a metallic spring is made nearly equal to the circumference of that part of the body to which it is applied. "One of the ends of the spring "is so fashioned, that instead of being prolonged in the hori-"zontal direction it is prolonged downwards, so as to apply itself "at the bottom of the abdomen on one side against that part of "the groin where ruptures most frequently take place; and I do "enlarge or make broad the said lower extremity of the said "spring, so as to admit of a facing of cork or other soft material "between the metallic face of the spring and the part which is "ruptured or disposed to protrude. I do not attach the said "facing of cork to the spring itself, but to the said descending "part of the spring another arm or elastic branch, which is "thinner than the spring itself, but of the same figure, and "bended inwards somewhat more than the said descending part "of the first-mentioned spring, I place an intermediate spring "or springs of any suitable figure, which press against the "said additional part or arm, and cause the same to act with a "regulated and suitable pressure against the ruptured part or "part requiring to be supported."

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 7th Report, p. 191.]

A.D. 1806, March 26.—N° 2922.

HINCHSLIFFE, Joseph.—"A new method of manufacturing "elastic spring trusses for ruptures, or rupture bandages." This Invention consists in taking a piece of whalebone of a proper breadth and thickness, and of sufficient length to go round the body, and subjecting every part of it to the blaze of a lamp; and when heated so as to be perfectly supple, it is moulded upon a wooden block to the exact form and size required. When cold it retains the shape given to it. "The head on which the spring "is fastened is made of sheet brass," or any hard metal.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 7th Report, p. 191.]

A.D. 1806, August 1.—N° 2954.

RAWLINSON, James.—" Certain improvements in apparatusses " commonly made use of as trusses or bandages for ruptures, and " various other purposes." The improvements claimed consist in using for the construction of the truss, whether double or single, indian-rubber, which is " cut, cast, moulded, or formed into such " sizes, forms," and of such strength as the case may require. The pad is made of the same material, or of leather, wood, iron or steel, according to the nature of the rupture. The thigh strap or straps are likewise made of the same substance; and, when braces or cross straps are needed, indian-rubber is affixed to each end of them. These elastic springs are covered with oiled silk or other impervious material, and afterwards with leather. The suspensory bandages of the patentee are constructed in the same way, variable in form, size, and strength, according to the requirements of the case.

[Printed, 4d. No Drawings. See Rolls Chapel Reports, 7th Report, p. 193.]

A.D. 1806, October 2.—N° 2970.

SALMON, Robert. —" Mathematic principled safe and easy " trusses for the relief and cure of ruptures." The patentee proposes to make the spring by exact geometric rules, so that it shall fit accurately the body, and exert on the pad and rupture the required pressure. This is varied by an additional spring or springs being fixed upon the simple or original spring, the force which each exerts being different, so that the pressure may be regulated according to the necessity of the case. The end of the spring to which the pad is attached has several screw holes, into one of which " the male part of the universal joint, having on its " top a strap pin," is screwed, and is inserted into the plate which receives and supports the pad. The screw holes allow the person to shorten or lengthen the spring at pleasure. The pad may be made of leather, and stuffed with any soft material. The patentee likewise claims, the making of cases for the spring, of silk, leather, or other substance, which may be put on or removed in an instant. The size and pressure of the spring are stamped on the front end of it.

[Printed, 8d. Drawing. See Parliamentary Reports, 1829. Patent Law, p. 208. Hindmarch on Patents. p. 534; and Rolls Chapel Reports, 7th Report, p. 193.]

A.D. 1807, July 28.—N° 3065.

ASTLEY, Joseph.—" Certain improvements in the manufacture " of sal ammoniac." In the first part of the process the patentee prepares " the salt called muriat of magnesia, or the muriat of " alumine, or one or other of the metallic muriats, or any of the " combinations of the muriatic acid from which the muriatic " acid is capable of being disengaged by heat." The salt which he usually employs is the muriate of magnesia, which may be obtained very easily " from the mother liquor of the salt pans " called bittern or salt oil," the other salts along with it being separated by evaporation and crystallization. The muriate of magnesia so prepared is used either in a liquid or solid form. When the former, animal substances of all kinds, or vegetable or mineral substances which afford ammonia or volatile alkali by distillation, are impregnated with the liquor holding the salts in solution; the proportions of the liquor employed varying with the kind of salt used, the strength of the liquor, and the nature of the animal substances which enter into the combination. These several substances are dried on a heated floor, though the drying is not an essential part of the process, and are afterwards distilled by the heat of a furnace, retort, or still, receivers being adapted to the same to collect the product; or they may be burnt, chambers or receivers being provided, adapted to the purpose, there being an aperture in either to admit air to maintain the combustion. When the muriate of magnesia is used in a solid form, it is mixed with the animal or other substances, and operated upon as in the preceding case. The product obtained by these processes is the " sal ammoniac " or muriate of ammonia.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 12 (*second series*), p. 248.]

A.D. 1807, August 25.—N° 3069.

REES, Richard.—" Certain improvements in trusses for per- " sons afflicted with ruptures." The patentee, when he adopts the truss made of one spring, fastens a plate and a cushion to the middle of it, as " it affords a steady and comfortable bearing for " the truss against the back of the patient." When the truss is not made as here stated, it is formed of two springs, permanently or otherwise fixed to the back plate, by " screws passing through " a long hole or slit in the said springs." It is directed that the lower end of the pad is to be applied to the upper edge of the os pubis, and that the end of the other spring may be placed immediately over the pad, where it is secured by a strap and buckle.

[Printed, 6*d*. Drawing. See Rolls Chapel Reports, 7th Report, p. 198.]

A.D. 1807, November 17.—N° 3081.

JEWELL, Joseph.—"A method of preparing or reducing to "an impalpable powder for medicinal use the substance com- "monly called or known by the name of calomel, whereby the "process usually employed of levigating the same is rendered un- "necessary." The calomel, which at first is a hard crystalline substance, is broken into small pieces, and is then put into an earthen crucible of an oblong form, only partly filling it. This is placed on its side in a furnace, provided with an opening, through which the mouth of the crucible protrudes, to which an earthern receiver, containing water, is attached, which has a chimney or tube to allow the escape of steam. Sufficient heat is applied to cause the calomel to rise in vapour, which is collected in the receiver, condensed into an impalpable white powder.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 13 (*second series*), p. 79; and Rolls Chapel Reports, 7th Report, p. 198.]

A.D. 1808, May 7.—N° 3129.

CHING, Rebecca.—"Certain improvements in a medicine then "called 'Ching's worm destroying lozenges." The specification describes two kinds of lozenges. The first kind is compounded of calomel, white sugar, crocus, and water, and this is boiled for several minutes, after which it is strained and beat into a mass proper for the making of lozenges. The second kind is composed of the extract of jalap, spigelia or worm grass, and white sugar, which, by the addition of water, are made into a mass and dealt with as in the foregoing case. The proportions of the ingredients used are stated.

[Printed, 4*d*. No Drawings. See Rolls Chapel Reports, 7th Report, p. 200.]

A.D. 1809, January 23.—N° 3192.

GODDARD, James.—"A method of, and machinery for manu- "facturing a certain description of wooden boxes, called chip "boxes or pill boxes, of all the various sizes hitherto made, "which machinery is also applicable to other useful purposes."

[illegible] follows:—An oblong square strong frame, upon [illegible] called the carriage, which is moved very steadily [illegible] in the frame." This "carriage carries along the [illegible] cutter," which "is made of plate steel, having the edge [illegible] bevilled, or ground only on the side of the face furthest [illegible] the wood intended to be cut, and the line of the said edge " is sloped or inclined to the line in which it is moved by the " carriage (while cutting) in an angle (by preference) of about " 30 degrees;" upon the frame is fixed a platform for supporting the wood to be cut, in which is a slit or groove, "wherein the " lower part of the said knife or point thereof moves and is " steadily supported." A "gage or cutter" is also fastened " to the said carriage, and acting crosswise with relation to the " knife, so that the gage cuts a line in the face of the wood, which " is afterwards shaved off" by the knife. More than one of such cutting parts may be used. A winch winding a chain or strap gives "motion to the carriage and cutter," or a straight rack or other means may be employed.

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 17 (*second series*), p. 73; and Rolls Chapel Reports, 7th Report, p. 203.]

A.D. 1809, August 4.—N° 3254.

STUART, FERDINAND SMYTH.—"A new substitute, the pro- " duce of this country, for peruvian bark." The leaves of the oak tree, the bark of its lesser branches, both dried in the shade, and the inner bark of the oak tree are reduced to a fine powder, which is the substitute for peruvian bark. A decoction is likewise made of the green or dried leaves for the same medicinal purpose.

[Printed, 4*d*. No Drawings.]

A.D. 1809, December 5.—N° 3283.

WARE, GEORGE.—"An improved apparatus and machinery for " the support and exercise of the human frame, and for the preven- " tion of bodily deformity." This consists of a raised platform, with side frames and pillars of wood "placed in an angle at least " of forty-five degrees," secured at the back part of the platform; two back boards slide up and down in grooves inserted in the pillars of the side frames. "At the back of the lower board is

" affixed two wooden sliding bars, which pass into grooves cut " into the centre of the upper board, the bars to be confined with " screws, so that the upper board may be raised and lowered as " occasion may require." A small moveable seat is attached to the lower back board, " the seat is to place the lower part of the " human body upon, to force down the backboard to work " the springs below them." These springs have at their upper part an iron bar, and they pass through a hole in the floor of the platform, and are fixed to an iron bar secured in the under part of the platform. There is a front board " for the knees of the person exercising to press against to put it in motion," framed to two pillars which " pass through two channels cut on each side of " the front part of the floor of the platform, and work at the " lower part upon the ends of a strong eliptic spring which is " secured to the under part of the platform in the centre." To the spring is affixed a regulating and gathering screw and frame of iron. The front board has four metal castors. Strong hooks are fixed to " widen or shorten the distance between the front and " back boards ;" in the inside of the front board are wooden stocks for the feet. There are arm springs keyed through the side frames at the back of the platform, to which are hung lines or ropes for the use of the hands and arms. " At the upper part of the back " board " is a support for the head.

[Printed; 6*d.* Drawing See Rolls Chapel Reports, 7th Report, p. 206.]

A.D. 1809, December 9.—N° 3284.

FELTON, SAMUEL.—" A botanical or medicinal preparation, " being a remedy for gravel and stony concretions, which I " usually denominate 'mucillage of marsh mallows.' " A brown paper square bag is formed, and the following ingredients are put into it in successive quantities or layers : flowers of marsh mallows, roots of marsh mallow sliced, the leaves of marsh mallow, liquorice root sliced, 'daneus sylvestris' and linseed. On the top of these a cake is placed composed of figs, raisins, juniper berries, gum arabic, and powdered usa ursi, these being pounded into cakes, mallow blooms being thrown over them. The whole is then pressed. The same layers are repeated with the exception of the flowers of marsh mallow, and are pressed. The same is repeated a third and fourth time, in the last case the mallow blooms being left out, and the flowers of marsh mallow added.

[Printed, 4*d.* No Drawings. See Rolls Chapel Reports, 7th Report, p. 205.]

A.D. 1810, October 8.—N° 3387.

PARKER, Ebenezer, and CLULEY, Francis.—" An adjust" ing bedstead on a double frame, with a fourfold motion for the " relief of sick, lame, infirm, and aged persons."

The advantages of the bed are stated in the Specification to be as follows :—

1. It can be placed in an inclined position, the head being raised higher than the feet.

2. It can have an inclination sideways, one side being lower than the other, while the head and feet remain on the same level.

3. The frame supporting the mattress and bed can be divided into two length or parts, and while the one remains level, the other can be raised to support the head and body.

4. The frame at the feet of the bedstead can be raised so as to support the legs and thighs to allow the knees to be bent.

The bedstead consists of two separate frames, the outer one consisting of four posts and four rails. The inner one may be adjusted to the required necessities of the case. The adjusting frame is suspended by gudgeons, centres, or pins, and a long centre or pin is fixed to it, projecting some distance from it, and rests on the head rail of the external frame. When the adjusting frame is placed horizontal, the bed has the appearance of a common bed. When the adjusting frame has to be raised at the head, the gudgeons at the feet are withdrawn, and to facilitate this the gudgeons at the sides and feet are cut with screws and are fitted into metal nuts fixed into the exterior frame, the ends of the said screw gudgeons are received into the holes made in pieces of metal to the sides and lower end of the adjusting frame. By turning the gudgeon at the foot back by the winch handle indicated, "its end is withdrawn from the adjusting frame, and then " by raising the center or pin, the adjusting frame is elevated " to the required position and retained in it by two bolts. In order that the bed may incline to either side, the side gudgeons are withdrawn, leaving the frame to rest upon the gudgeons at the head and feet. The adjusting frame, though in the foregoing remarks considered as having its sides in one piece, is in fact in two lengths, connected by a hinge or other joint, and held firmly together by bolts which pass through cramps and through the other part of the adjusting frame. When the bolts are withdrawn, the upper part of the frame may be raised, while the lower remains fixed horizontally.

[Printed, 6*d*. Drawing.]

A.D. 1810, October 31.—N° 3398.

MANN, THOMAS.—"Certain improvements in the construction "of artificial legs." The invention consists in the adaptation of spiral springs in the construction of artificial legs. Three spiral springs are connected with the patella, designed to preserve the knee in perfect shape in all positions. The knee joint and the ancle joint have each a centre pin. To the ancle joint are fixed spiral springs, one being designated a repeller and the other an attracter, by which the shape of the ancle is preserved, and the foot sustained when taken from the ground. The patentee likewise describes two other spiral springs of great power, designed to improve the action of the several joints in the knee, ancle, and toes. One of these is fixed by means of a pin, which passes through the circular part of it into the inner part of the thigh case, above the centre of the knee joint, and is attached to the lower or leg part by a thong, which acts in a circular groove, and enables the "wearer to recover the leg to a straight position after the flexure "of the knee by the movement of the limb when in the act of "walking." The other spring is fixed in a similar manner to the hollow part of the foot.

[Printed, 6*d*. Drawing. See Rolls Chapel Reports, 7th Report, p. 206.]

A.D. 1811, March 4.—N° 3402.

SALMON, ROBERT.—"Certain improvements for the relief of "hernia, which instruments I call Salmon's new royal patent "artificial abdomens." These consist of a quadrangular shaped plate "with the lower part resting on the lower intersection of the "abdominal muscles, and laying a little over the upper edge of "the os-pubis," the upper part of the plate resting on the flexible part of the abdomen, the connecting or middle part of the plate resting on the interior edge of the herniary aperture; in the "centre of this the impelling force is applied and connected by "a joint, so as to leave the plate at liberty to adjust itself to the "changes in the position of the body." The pressure is given by a horn-like spring, loosely connected by a screw to the centre of the plate. "The extreme ends of the spring, when at liberty, "spring forward from the front of the body, and project there-"from like horns;" straps of leather or strings connected with these springs are tied round the body.

Several modifications of the above are described.

[Printed, 10*d*. Drawings. See Rolls Chapel Reports, 8th Report, p. 86.]

A.D. 1812, August 28.—N° 3597.

PAXON, George.—"Certain improvements in the manufacture " of a bedstead or bed frame to relieve the bedridden, the rup- " tured, and sufferers with broken limbs, gout, or any other " affliction." In the Specification the bedstead or bed frame is described as having ten movements, by which the patient may be raised gradually from his horizontal position to any angle till fairly on his seat; a part of the apparatus may be let down so that any application may be made to his back and shoulders; by two combined movements placing him on his right or left side at any angle; elevating him from the horizontal position from the feet to the head, or from the head to the feet, raising him with his mattress and bedding, with his bed frame, for purposes of cleanliness; suspending him above his bedding, so that all upon it or connected with it may be changed.

"The machine consists of a framed bedstead, which will lay on " any other bedstead, containing two lifting frames resting on " ledges inside the frame, and a sacking frame with double screw " rails, one at the head and one at the feet, for the double pur- " pose of either lightening the sacking or moving the centre " hole, to suit the convenience of the patient. The two lifting " frames and the sacking are hinged right and left side, to raise " alternate. Two uprights, morticed into the head and foot rail, " will support an iron shaft or spindle, at each end of which are " two cog wheels, which rise two upright iron racks perpendicular, " working on the two uprights. These racks are connected with " or disengaged from the bell-shape irons to perform the different " motions of the inner frames, which motions are all accomplished " by one handle. On the framed case rests an additional frame, " occasionally to raise the body, independent of the bedding, for " the purpose of changing the same."

[Printed, 6d. Drawing. See Rolls Chapel Reports, 8th Report, p. 99.]

A.D. 1812, December 21.—N° 3631.

BARKER, John.—"For his invented and brought to perfection " a new instrument of great practical utility to surgeons, namely, " an instrument whereby they may with the utmost facility stay " and prevent the hæmorrhage of the subclavian artery safely " in cases, when necessary amputate the arm at and from the " shoulder joint."

[No Specification enrolled.]

A.D. 1813, January 15.—N° 3638.

BUNDY, William.—" A new manufacture of lint." This consists of a number of bobbins, on which are the yarn intended for use. These are put on wires and fixed on boards in front of the machine; the yarns pass first through a reed or piece of metal with holes, the number of which "in the inch must be governed " by the size of the yarn, but each hole is six times as large as " the apertures in the ordinary reed;" the yarn after passing through the reed passes through a pair of fluted rollers pressed together by a lever, then through a similar pair of rollers, on whose axis a lever bears with sufficient weight to press the yarn so as to hold against the drag of a knife fixed for scraping it. On the axis of one of these rolls is a spur wheel, in the tooth of which works an endless screw having a ratchet wheel, the number of teeth of which regulate the quantity of yarn to be delivered from between the second pair of rolls at every return of the knife; the yarn from thence passes over a steel cushion, on which is fixed a piece of thin sheet brass to guide any broken end of yarn to the steel cushion. Under the knife is fixed a "piece of steel " hardened and tempered; the upper edge of which, with teeth " filed in it about sixty to the inch, runs parallel with the edge of " the knife." To the knife also is fixed, parallel with its edge, a similar piece of hardened and tempered steel, having teeth of about sixty to each inch on the bottom edge; the yarn, having been scraped into lint, now passes over the cylinder, which bears on small centres, and keeps the yarn free from the cushion while working; from this it passes over the roll without the frame "in " a state to be pressed in a common screw press, or passed between " rolls, and is then fit for use."

[Printed, 6d. Drawing. See Repertory of Arts, vol. 24 (*second series*), p. 321; and Rolls Chapel Reports, 8th Report, p. 95.]

A.D. 1813, June 29.—N° 3712.

PENNY, James, and KENDALL, Joseph.—" For their in" vented improved principle or plan for the making of pill and " other small boxes."

[No Specification enrolled.]

A.D. 1813, November 1.—N° 3744.

JAMES, Samuel.—" A sofa or machine for the ease of invalids " and others." The bottom of the sofa is divided into three parts, one for the back, another for the thighs, and a third for the legs. There is a rack which causes the back to be elevated "the "fourth part of a circle of thirty-six inches diameter," and another rack which causes the thighs to be elevated the "fifth part of a "circle of twenty inches diameter." These racks turn on a spindle on each side of a cross bar, and a spindle with a check wheel keeps the parts at any degree of elevation.

[Printed, 6*d*. Drawing. See Rolls Chapel Reports, 8th Report, p. 103.]

A.D. 1814, September 8.—Nº 3840.

PENNY, JAMES, and KENDALL, JOSEPH.—"An entirely new "and improved principle or plan for the making of pill and other "small boxes." The boxes are made out of solid wood by means of a boring-bit which is fixed in a frame of wood, the whole being "attached upon a lathe mandrel by being screwed upon the end "or fixed by a square piece into the mandrel."

[Printed, 6*d*. Drawing. See Rolls Chapel Reports, 7th Report, p. 116.]

A.D. 1815, March 14.—Nº 3894.

MILLS, JOHN.—"Improved elastic stays for women and children, "and also to give relief to women in a state of pregnancy." This consists in the introduction of a "flexible or elastic portion in "those parts of the stays best calculated to give relief to the "wearer, and at the same time preserving that stability and "support usually given to the body by the common adoption "of whalebone, steel, and other hard or inflexible materials." Three kinds of stays are described, the first for growing persons or for adults, made with the same materials as common stays, with an elastic or expansive slip down the front, composed of springs of brass, copper, or iron wire, "brass wire worm springs" preferred, and covered with silk, satin, &c. The second, intended for women pregnant, with a much larger piece of elastic material down the front. The third, intended "for women in a still "further advanced state of pregnancy, and consists, in addition "to the last described, of expansive or elastic portions placed in "the sides." There are "likewise buttons and loops crossing "these portions to prevent too great a degree of expansion when "not required; these stays have also an opening slip in the side "with lacings to allow of being enlarged, and a flap lining or

" covering under the same to prevent cold from passing to the " wearer when the lacings are open."

[Printed, 6*d.* Drawing. See Rolls Chapel Reports, 8th Report, p. 105.]

A.D. 1815, June 1.—N° 3919.

LINGFORD, JOHN.—"An anatomical self-regulating truss." A steel spring is made to pass nearly round the body, to which is attached the head of the truss made of steel or other metal, which is moveable upon a pivot or joint where it is connected with the pad. The latter, which contains horn or other hard substance, is secured to the head of the truss by a screw, which passes through an aperture of the head into the horn, "and may be adjusted " higher or lower by sliding the screw upwards or downwards," To adjust it sideways the head is moved upon the pivot or joint alluded to, and when so adjusted to the affected part of the body, the screw, which is rivetted to the end of the spring, and coming " beyond the joint, admits of adjustment by the wearer to any " part within a circuit of three inches."

[Printed, 6*d.* Drawing See Rolls Chapel Reports, 8th Report, p. 106.]

A.D. 1815, August 23.—N° 3954.

SAVORY, THOMAS FIELD.—"The combination of a neutral " salt or powder which possesses all the properties of the medicinal " spring of Seidlitz, in Germany, under the name of the Seidlitz " powders."

Recipe No. 1.—"20 lbs. of subcarbonate of soda" are dissolved in 25 gallons of boiling water, and 24 lbs. of supertartrate of potass are added, filter through paper, evaporate gently till a pelicle appears on the surface, when set it aside to crystallize, redissolve these crystals in six times their weight of boiling water, filter, evaporate, crystallize, and powder the crystals.

Recipe No. 2.—Liquify by heat 100 lbs. of "subcarbonate of " soda," and add in powder 25 lbs. of carbonate of ammonia, dry at 212°, and pass it through a fine sieve.

Recipe No. 3.—100 lbs. of supertartrate of potash are mixed with 30 lbs. of finely powdered chalk, and added gradually with stirring to 160 gallons of boiling water, the tartrate of lime precipitated is washed, and mixed with stirring with 30 lbs. of sulphuric acid previously diluted with eight times its weight of water, frequently stir during 24 hours, the solution, separated from the sulphate of lime by pressure, is evaporated and crystallized and the crystals redissolved in boiling water, filtered, and crystallized.

Each dose consists of 2 scruples of recipe No. 3 finely powdered and dissolved in half a pint of spring water, to which are added 2 drams of recipe No. 1 and 2 scruples of recipe No. 2 (previously mixed). They must be stirred together and taken while efferverssing.

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 29 (*second series*), p. 14: *also* vol. 44 (*second series*), p. 122; Webster's Reports, vol. 1, p. 83; Webster's Patent Law, p. 88 (*also* p. 130, case 75): Webster's Letters Patent, p. 72; Ryan and Moody's Nisi Prius Cases, vol. 1, p. 1; Carpmael's Reports on Patent Cases, vol. 1, p. 431; Parliamentary Report, 1829 (Patent Law), p. 208; Holroyd on Patents, p. 124; and Billing on Patents, p. 93.]

A.D. 1816, March 14.—N° 3997.

FITKIN, John, FITKIN, William, and BARTON, Joseph.—" A new truss." A piece of iron or other metal is attached to the spring for the reception of the pad and its appendages, and the head, which is continued in the direction of the spring, has a hole in it for the reception of a screw. On this head is fixed a half ball made of iron or other metal, having a hole for the reception of the screw, which half ball has fitted to it a socket made of the same material, the other side of the latter being flat, and having likewise a hole for the reception of the screw. Another half ball and socket, similar to the foregoing, are fixed upon the same head. The pad is a plate made of iron or tin, and has a hole into which the screw passes. On the centre of the plate is a bridge made of the same material, leaving a hollow place for the reception of the half ball and socket last described, and has also a groove in the top for the reception of a pin. The bridge is attached to the plate by means of rivets, and there are four points adapted to fix the cork to the plate which forms the pad. In the double truss the construction of the pads is the same, but there is a plate of iron or other metal with two loops attached by rivets to each end of the spring at the back, and each end of the spring passes under its respective loop. There are grooves near the ends of the springs, through which a screw passes, to be screwed into " the plate fixing the springs when adjusted to a proper extent."

[Printed, 6*d.* Drawing.]

A.D. 1816, June 1.—N° 4039.

SHAND, William.—" Certain improvements in the construc-" tion of artificial legs and feet, made of leather and wood, acting

" by a lever and spiral spring." Into the centre of the wooden leg is introduced an iron tube of sufficient capacity to receive a strong steel spiral spring, which is retained in its position by two projecting flanches secured to the upper end of the leg. The lower end of the tube has a bottom fitted into it, and in its centre is a hole through which passes a round pin rising up through the hollow of the curved spring, its superior end having a nut screwed upon it which nearly fills the tube. When the pin is drawn down, the nut descends into the tube and compresses the spring, and this reacting draws up the pin. The foot is jointed to the leg by a mortise cut in the latter at the front side for the reception of a tennant formed on the foot, "and a round pin " which passes through both is the joint or centre of motion." A lever made of iron is firmly fixed to the tennant part of the foot by a screw, and is jointed to the pin of the spring, which pin is bent at right angles to reach the joint in connection with the lever. This joint is considerably above the centre pin in the foot, "and " this occasions the action of the spring upon the lever to be " equal to what it would be if a lever much shorter than the dis- " tance" (that is, between the joint or centre pin and the joint at the upper part of the lever) was on a level with the joint or centre pin. The toe part of the foot is reduced to a tennant at a point indicated, which is received in a mortise in the foot, and a pin forms the joint. A spring is fixed in a hollow at the under side of the sole of the foot, and is firmly screwed at the other extremity. The extremity of the spring has a small roller fitted to it, to diminish the friction of the surface with which it is in contact, which surface should be plated with iron; or, instead of this, another steel spring may be applied beneath the foot, and the roller may be made to bear against it, and the action of the two springs may render the motion more easy.

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 38 (*second series*), p. 75; and Rolls Chapel Reports, 8th Report, p. 112.]

A.D. 1816, July 11.—N° 4045.

TOWERS, John.—" A tincture for the cure or relief of coughs, " asthmas, and other diseases of the lungs and chest." Highly-rectified spirits of wine, nitrous acid, and refined white sugar, are subjected to distillation in a stoneware vessel, at a sand heat, through a stoneware condenser into a glass receiver, until all the " ethereous spirit " has come over. The product is purified by means of vegetable alkali, and is redistilled in similar vessels. Spirits of wine and concentrated sulphuric acid are then distilled at a sand heat, from a glass or stoneware vessel into a glass receiver; and when the ethereous spirit is carefully collected, the foregoing product and this are mixed together in certain proportions. Clear water, a portion of the first mixture and of the compound spirit, are put into a glass bottle, leaving space for the addition of bruised ipecacuanha, dried squill, unstrained storax, benzoic acid, opium, essential oil of sassafras, and hay saffron. The bottle being well corked, these ingredients are digested for ten days, being shaken several times daily, and when strained through paper the medicine is fit for use.

[Printed, 4*d*. No Drawings.]

A.D. 1816, August 19.—Nº 4061.

SALMON, Robert.—"Improved instruments for complaints "in the urethra and bladder." The Specification includes three instruments: a jointed catheter, made of metal or of other materials; a metallic jointed bougie or probe, and a pliant or resistable bougie. The first portion, one half of the jointed catheter, is a metallic tubular stem, united to tubular beads, spherical, oval, or mixed, which terminate in a flattened neck having an eye to receive a wire or thread which enters "into the next bead above "it." From the other extremity of the instrument a fine double wire or string is passed through the entire length of the tube and all the beads, and through the eye in the last bead. The end into which the double wire is introduced has a cork fixed into it, fastening the thread and keeping the beads together, in which cork is a hole, through which fluids may be injected into the bladder, or the urine drawn from it. The jointed metallic bougie or probe is solid, the first half is in one continuous piece, and at its termination it is jointed to the first of a series of small pieces which are jointed and pinned. The first joint has play upwards and downwards; the series of jointed pieces move upwards only. The terminating joint is turned up at the end.

The curvilinear metallic bougie or probe is constructed on the same principle as the last, except that the series of pieces jointed are curvilinear. The bougies, pliant and resistable, may be covered with any composition. A piece of platted line bound with thread is recommended, and when so prepared they are thrown into boiling wax, and being thoroughly saturated with it, they are rolled when cold on a slab to make them smooth and straight. They are afterwards coated with any other composition by dipping them, as in the making of candles, or the composition hot may be laid on with a brush, after which they are to be rolled as before.

[Printed, 6*d*. Drawings. See Rolls Chapel Reports, 8th Report, p. 110.]

A.D. 1816, November 21.—N° 4087.

FORD, Robert.—" A medicine for the cure of coughs, colds, " asthmas, and consumptions, which I denominate ' Ford's " balsam of horehound." It is compounded as follows :—Horehound and liquorice root, with a quantity of pure water, are infused in a still several days, to this infusion are added spirits of wine, brandy, gum camphor, extract of opium, gum benjamin, dried squils, oil of anise seed, and clarified honey. These ingredients are digested together in a close cask or vessel for several weeks. The proportions of the substances used are given.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol 31 (*second series*), p. 142; and Rolls Chapel Reports, 8th Report, p. 116.]

A.D. 1817, May 8.—N° 4116.

WILMS, Henry. — " An artificial leg, arm, and hand, on an " improved construction." In making a hand, each joint of the fingers, &c., receive a small circular steel spring fastened by a staple, having a small niche at the end to give it a firm hold ; the other end, which lies in the centre of this circular spring, is received into one end of a centre key, by which it is worked. A small brass circular plate is fastened to the centre piece, which is likewise circular, of the joint, and the centre key stated above passes through square holes in both, a piece of wood secured by screws covers and completes the joint. A string of catgut passes through a hole drilled for the purpose " from the tip of the finger " up the back of the finger and hand." In the inside of the first joint of the thumb is a piece of wood, which supports one end of the centre key of that joint, and an additional string of catgut between the first and second joint and running up to the back of the wrist, the six catgut strings from the fingers and thumb come out of the back of the hand, and severally enter the back of the wrist, and coming out in the inner part of the wrist are secured each by a pin ; " by extending or contracting these strings the hand may

" be kept open or closed at pleasure;" a bar fastens the hand to the arm.

The arm is made of hollow wood covered with soft leather; the elbow joint is constructed very much in the same manner as the finger joints. The leg is made of the same materials as the arm, and the joints are made much in the same manner, and the foot is likewise jointed on in the same way.

" All the joints in this Invention, whether of the hand, the arm, " or the leg, are constructed on the same principle, are formed of " the same parts and materials, and are worked in a similar man- " ner, with this exception, that the joints of the knee, the ancle, " and the elbow, require the brass groove and stopper, which are " not required in the other joints; and, again, the groove and the " stopper in the joints in which they are used supersede the " necessity of the small brass plate used in the joints of the fingers " to sustain the friction."

[Printed, 10*d*. Drawing. See Rolls Chapel Reports, 8th Report, p. 117.]

A.D. 1818, August 24.—N° 4288.

MACHELL, Thomas.—" An improved method of applying, for " medicinal purposes, the agency of atmospheric air, liquid or " gaseous substances, to the external surface, and to some of the " internal cavities or passages of the human body, and for the " more convenient and useful mode of employing oil and spirits " on similar principles in lamps and other luminous apparatus."

The receiver or outer case of the self-acting injecting apparatus may be made of metal, elastic gum, leather, or any other proper substance, and of any size or shape. It has two perforations, one in its upper part, through which that which has to be injected is introduced; the other, to which the forcing pump or syringe is to be either permanently fitted to, or form a detached part of. At the end of the receiver a stop-cock is fixed, the tube of which must nearly reach the bottom of the receiver, having at its other end a tube, either flexible or otherwise. A tube of the same description may also be added to the stopper that secures the aperture which receives the fluid to be injected, and a pipe or pipes made of ivory or of other material may be attached to the outer ends of the tubes, for the purpose of directing the injection to the part of the body where it is required. Directions are given for using the apparatus.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 2, p. 384; and Rolls Chapel Reports, 8th Report, p. 129.]

A.D. 1819, April 20.—N° 4359.

PINDIN, Philip. — "An improvement on single and double "trusses." A piece of calf, morocco, or other leather, is cut into the form of the required pad. Another and a thicker piece of the same size is cut, and the two, with their rough sides in contact, are held together by studs which pass through them into the tin or other metal plate, which is the foundation of the pad, and to which they are rivetted. The second piece of leather has in its centre two holes for a ribbon to pass through. A piece of cork of the same shape, but less in length and breadth, is on one side cut into a dish-like or hollow form, with a hole in its centre, about an inch in diameter. The cork is then covered with wash leather ("hole and all"), and is pressed into the hole towards its convex surface; and on the latter a piece of calf or other leather, larger than the hole, is pasted or glued upon it, having in its centre a hole for a ribbon. The concave side of the cork is covered with satin or other material, and stuffed with wool or other soft substance, with the exception of the centre hole, the stuffing making the pad in all directions larger than the cork. A moveable pad, composed of satin, linen, or wash leather, and stuffed with a soft material, "is fixed to a narrow double ribbon "or tape, passing through the central holes in the several "leathers of the pad, and is tied in the front." The pad is held in its place by the body band, which may be made of various materials. The buckles of the band have under them a small pad. The pads, of the single and double truss applied to the rupture, are constructed in the same way, the only difference being the bands or straps necessary to secure them to the body.

[Printed, 8*d.* Drawing. Rolls Chapel Reports, 8th Report, p. 132.]

A.D. 1819, December 4.—N° 4418.

AUBUSSON, Charles William Feuillade. — "An im"proved mechanical apparatus, instrument, or machine, intended "by me to be called an aid-form, for the prevention and remedy "of deformity, and ill-shape in the trunk or body parts of the "human body." This consists of a belt for the waist, at the back of which is a foundation plate, on which are the main adjusting joints, having rings or carriers turning upon screws, to each of which spring blades are fixed, capable of having their angles of inclination varied by screws. These spring blades have shoulder rings affixed to them, which "can also be varied in two several "ways."

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 1, p. 247; and Rolls Chapel Reports, 7th Report, p. 122.]

A.D. 1820, June 20.—N° 4478.

LODGE, JOHN BUTLER, and BITTLESTON, JOHN, junior.—"Certain improvements in the construction and application of "spring trusses or bandages for the relief or cure of hernia." The spring is formed of two parts, which are laid over each other and rivetted. The spring is united to the metallic part of the pad by means of a boss, "which has a female screw in it to receive "the male screw, in the head of which is a slit for the purpose "of turning it either way as may be required." The spring is united to the bandage or strap, which passes round the rest of the body by sticking or other modes, the inner part being covered with flannel, and the outer with leather. The metallic part of the pad is covered internally with leather, and externally with several folds of flannel or other soft material, and over that with linen and wash leather. The double truss resembles the single truss, excepting that the screw hole is in the centre. The several straps by which the single or double truss is secured in its place, have nothing peculiar in their construction or adaptation. The supposed advantages of the invention are stated to consist in the use of a reverted or reverting spring or springs.

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 1, p. 352; and Parliamentary Report, 1829 (*Patent Law*), p. 208.]

A.D. 1820, July 11.—N° 4484.

READ, JOHN.—"An improvement in syringes." The syringe may be made of any kind of metal. The tube and piston are on the same principle as the common syringe, "but the tube is to be "drawn to a true cylinder on triblets. At the bottom of the tube "is a socket with two screw joints, and a partition between them. "In the lower part of the socket is a spherical valve, confined to "its action by the above-mentioned partition," which admits the fluid to pass through holes made in it for the purpose. At the side of the socket mentioned, and "between the screw joints, is a "small branch, in which there is another screw joint containing "another spherical valve, confined to its action by a wire passed "through the joint" at a point specified. A flexible tube is attached to the side branch and to the ivory tube at its upper end. The upper end of the tube in which the piston works has connected with it a small pipe to admit the air in and out at every motion of the piston. "The socket at the bottom of the tube, " and the side branch containing the three screw joints and two " spherical valves, with the small pipe at the upper end of the " tube, constitute the improved syringe." Syringes on the same principle may be constructed, and applied to similar purposes in the veterinary arts; and also for watering plants in conservatories and hot houses; but in the latter case, " the improvement by " which such power is obtained, is by admitting the charge or " water to charge the tube by the means of a spherical valve, " inclosed in a socket at the lower end of the tube in which the " piston works; the upper end of which tube has also a pipe for " the admission and exit of air."

[Printed, 8*d*. Drawing. See London Journal (*Newton's*), vol. 1, p. 404; and Mechanics' Magazine, vol. 2, pp. 103 and 141.]

A.D. 1820, July 20.—Nº 4492.

THOMASON, Henry Botfield.—" An improved mode of " making cutlery, (viz^{t}.), that class of cutlery called or styled table " knives, desert knives, fruit knives, pocket knives, scissors, razors, " and surgical instruments." The principle claimed by the patentee consists in inserting into or attaching to the blades made of gold, silver, copper, or brass, or any combination of these or of other metals, a piece of steel to form the cutting edge, or cutting part or parts of the instruments mentioned. The metallic part, with the exception of the steel, may be gilt or plated over, polished, or variously ornamented.

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 2, p. 184.]

A.D. 1821, January 15.—Nº 4526.

SALMON, Robert.—" Certain improvements in the construc- " tion of instruments for the relief of hernia and prolapsis, which " instruments, so improved, he denominated scientific-principled " variable, secure, light, easy, elegant, cheap, and durable trusses," so called from having a pad at the back as well as one in the front, which is applied to the rupture.

1. *The opposite sided truss* is made of a " round or oval steel wire " spring to go round the body, with eyes at each end to receive " a pin, and attach to the front and back parts." The pad may

" be made of any material, size, or shape, and is " attached by a " universal or staple moveable joint in the centre of the pad." The back has a pad made and fixed in the same way as the front pad.

2. *The both sided truss* made of the same round or oval steel spring, " with eye at back to receive a pin, and attach to the back " pad and eye at front, and to receive a screw and attach to the " coupling bridge, which bridge is united in its centre by a screw " on which it is moveable, leaving both cushions self-adjusting " on the body." The back pad is attached by a joint and left at liberty to adjust itself to the bearings of the body.

3. The double truss has the same kind of springs, and the front pads are attached as already described. The back pad has a mortice " in the middle of a knob, into which both the back ends of the " springs are pinned, so as to leave play and motion for the " cushion to adjust itself on the bearing."

4. The double truss with connected front pads. The steel wire springs the same as before described, and likewise the front pads are connected with bridges. There is a front bar to which both the springs are jointed and turn as a hinge, there are small cushions fixed at the other ends of the springs to rest on the hips. The expansion of the springs and the pressure of the pads on the body are regulated by a strap and buckle.

5. Vertical truss. This is formed of a round or level steel wire spring with eye at each end, the front pads connected by bridges as in the foregoing examples, and there is likewise the back cushion. The peculiarity which the truss offers is the curvature in the wire, so as to clear the scrotum and again return to the centre of the body.

6. Horn-like or front spring truss. The spring is of flat rolled steel " curved on the face to raise and clear the thighs." Front pads double or single, the former attached and connected as in the preceding examples. The single pad is attached to a half bridge only, and this is screwed fast to the spring.

7. Horn-like or front contracted spring truss with non-elastic ends. This steel spring is " set outwards when at liberty, so as " to project forward itself, and also to project the non-elastic " ends." The pads, whether double or single, and the straps to tighten the springs, are the same as have been described.

8. This truss has horn-like front springs curved to clear the thighs. It has a centre piece of brass or other metal enclosing

and fast on the steel wire to which it is rivetted. The curved wire spring may be applied to double or single pads.

9. This truss has a horn-like non-elastic front bar, to be impelled by self-regulating belts, the construction of which will be explained under the following number. The aforesaid bar is curved on the face to clear the thighs, and formed to fit the shape of the body, with studs or eyes to connect it with the self-regulating belt. The pads, whether double or single, are the same as before described.

10. Elastic self-regulating bandage or belt is made by introducing spiral springs into a case made of leather or other soft material, which is connected by straps with the ends of the springs. This kind of belt may be attached to several of the springs previously mentioned.

11. A back spring truss to place on the back of the body enclosed in soft linen or leather case. The back plate has a pad to rest on the body "with a spherical knob on its centre and " moveably attached by a screw to the spring." This spring may be connected with any of the before-described front springs, cross bars, or any other contrivance for impelling pads on the body.

12. A bandage with triple springs for prolapsus ani. The belt which goes round the body has a buckle and strap, and to the front part of it are attached two bands or cases made of proper materials, but fixed apart from each other in the form of the capital letter V. In both cases there are spiral springs. At their lower or free extremity they are united to another case in which there are also spiral springs, and to this a strap is attached which passes between the thighs to a buckle or stud behind the body. The cases enclosing the springs are open at the ends in order that the springs may act. Near the intersection of the three springs is placed a small cushion to support the prolapsus ani.

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 3, p. 117.]

A.D. 1821, July 5.—N° 4567.

COLES, William.—"Braces or instruments for the relief of " hernia or ruptures." This invention consists in the introduction of a spiral spring, and the particular mode of attaching the same between the pad and the wasteband, brace, or girdle; and also in the introduction of a plate of steel into the brace for the purpose of forming a resistance to the spring. "The spiral spring

" is so constructed that it will sink into the level of its lower coil, " its appearance when pressed flat resembling a coiled snake." The bottom coil is, by means of loops, soldered to a metallic plate formed " to suit the case of the complaint, which plate is stitched " to a leather pad stuffed with an elastic substance." To keep the spring upright a leather strap is also stitched to the pad and fastened upon a nut in the centre of the spiral spring. The plate of steel above referred to is fastened on to the girdle where the spiral spring presses. Two oval pads may be used. Two spiral springs with a bar joining the two may be employed as " a " bandage for umbilical hernia."

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 3, p. 179; and Mechanics' Magazine, vol. 1, p. 426.]

A.D. 1821, October 18.—N° 4600.

GRIFFITH, Owen.—" An improvement in the principle and " construction of manufacturing or making of trusses for the " cure of ruptures or hernia in whatsoever part or parts of the " body it may be situated." This is said to be not in the use of elastic bands for trusses, but in " the particular curvatures given " thereto, the steel band going entirely round the body, and the " manner of uniting and securing the ends of it so as to allow of " the necessary movements of the body, &c., without disturbing " the pad or pads; the manner of forming and fixing the back " pads to the band, and, lastly, the machines whereby the requi- " site curvatures is given to the bands." These bands have side curvatures upon the hips, and as they pass to the back they descend " so as to be nearly level with the centre of the pad or " pads." " In the double trusses both ends of the bands are " fastened to their front pads by means of rivets, &c., but in the " single trusses one end only is made fast to the front pad, the " other end being connected in such a manner as to be easily loosened for the purpose of putting on or taking off the truss, " or of lengthening or shortening the band. The end to be " loosened is secured by passing between the end which is firmly " secured to the front pad until any one of the adjusting holes in " it are brought opposite to the pin or stud affixed to the spring " fastening," &c. The machines for curving the bands are, first, an iron block, having a rebate formed along it, each end of which is rounded and two screws pass through it. A curved loose bar lies in the rebate; between this bar and under a hook at the top of the block, one end of the steel band, previously heated to a proper degree, is placed, and the first screw is turned "until it "drives all the parts into contact and retains that end of the "band firmly, which is then bent by hammering until it assumes "the curvature of the block," when the second screw is turned to secure it. "For a double truss the other end of the band "undergoes a similar operation." "It is now ready to be sub-"jected to the operation of another machine" consisting of two cast-iron blocks, which, together, form "a figure resembling that "part of the body around which the truss is to be worn." The band is again heated and coiled round this form, is secured to it by a series of screws "acting in screwed holes made in the ears "affixed to the blocks."

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 5, p. 130.]

A.D. 1822, March 21.—N° 4660.

CONWELL, William Eugene Edward.—"An improvement "in the preparation and application of a certain purgative vege-"table oil." This consists as follows:—"Croton tiglium nuts" are carefully washed, and the bad rejected; they are then boiled in clear water, denuded of their envelopes, and the bad rejected, when they are bruised or ground, enclosed in hair cloth, and placed in a vessel in a hot bath, after which they are pressed, and the oil filtered through bibulous paper is preserved in bottles for use. The "internal use" of croton oil is claimed.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 4, p. 235.]

A.D. 1822, June 13.—N° 4681.

GARDNER, Denny.—"A stay, particularly applicable to sup-"porting the body under spinal weakness, and correcting de-"formity of shape." "The principal feature of this invention is "a steel (or other) support or stay, composed of several pieces of "plate steel with joints, which supports are intended to be intro-"duced into the shape or body of ordinary stays under each arm, "and to be there secured by flaps or lappets, tied or laced tightly "to the shape. The upper end of each steel support or stay is to "be formed as a crutch head, and covered with leather or other "soft material, so as to set close under the arm. The lower end "of each steel support or stay is also to be formed as a crutch "head, and covered with leather, which is to rest upon the hip of

" the patient; and the length of these steel supports or stays may " be lengthened or shortened as circumstances may require." This invention may be used by "gentlemen, and may be attached " to a riding or hunting belt, assisted by such straps or braces as " the circumstances of the patient may require.'

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol 4, p. 241.]

A.D. 1822, June 26.—N° 4684.

GAUNTLETT, THOMAS.—" Certain improvements in vapour " baths." These are, conveying steam for a vapour bath in two or more directions at the same time and by the same movement. One of the "two directions being under or immediately about " the feet and the other or others upwards generally into a casing " or dress, suspended by a portable frame over the patient," and the steam is regulated either by the patient or by an assistant by means of a handle and universal joint brought to any situation most convenient to meet the hand of any operator. The boiler, supposed to be in a common bed-room fire, has a safety valve at the top, a pipe with two universal joints comes from it into a receiver into which the steam passes placed under a bell-shaped dress or casing, close to a stool on which the patient sits, and another stool on which he places his feet. On the top of the receiver is a hollow screw plug which is screwed up by a handle and as it rises it exposes passages for the emission of the steam; this screwing up is done by a handle, which is shown passing through a small loop of leather on the side of the stool and thus brought to the hand of the patient. The casing or dress over the patient is suspended from a frame by a cord and pulley.

[Printed, 10*d*. Drawings. See Repertory of Arts, vol. 43 (*second series*), p. 268; and London Journal (*Newton's*), vol. 4, p. 281.]

A.D. 1822, November 9.—N° 4725.

JEKYLL, JOHN.—" Certain improvements in steam or vapour " baths, to render the same more portable and convenient than " those in present use." These are, first, "the method of " regulating the flow of steam in a precise manner by the " revolving flat plate with divisions upon it." The steam is made to enter a circular box, the cover of which is fastened by a screw in the centre, the cover is divided and numbered; these divisions are read off against a small stationary pin projecting from the rim, the cover turned round by a knob, the division opposite to the pin indicates how much the under surface of the cover is raised from the rim to permit the steam to flow.

Second, applying a second cock for regulating the escape of steam; this is on the side of the box.

Third, constructing the steam chamber so as to contain mineral or other substances. A vessel with a projecting rim and perforated bottom, and open at top, fits in the upper part of the steam chamber, into which these substances are placed.

Fourth, applying a flexible pipe for conveying steam to any part of the body.

Fifth, securing the cover of the boiler as follows:—A metal ring soldered to the boiler, its upper edge is turned flat, and is ground to fit under the edge of the cover, which has a projecting ring formed on it to enter the cavity of the above ring. The cover is held down by three metal clamps, being forced down by thumb screws.

Sixth, instead of a cock to shut off the supply of vapour from the steam chamber, a disc is adapted to be turned on its axis by a handle on the outside of the pipe, so that it can be placed edgeways to allow the steam or vapour to pass by freely, but when it is placed across the pipe it closes up the orifice, and obstructs the passage of the steam or vapour. It is composed "of two " thin plates of metal, having an elastic substance (such as " several folds of linen) placed between them, being held " together by rivets."

[Printed, 8*d*. Drawing. See London Journal (*Newton's*), vol. 6, p. 14.]

A.D. 1823, April 22.—N° 4786.

RAWLINS, James.—" A bedstead, machine, or apparatus, for " the relief of invalides." The frame of the bedstead is made as usual, but longer; the posts have a shoulder turned at the top, on which rests a tester frame, with or without a smaller one above it, "but it must be of sufficient strength to bear the strain of " drawing up a frame, with the patient lying thereon." This frame is "suspended from block pullies by ropes, by means " of which it is raised and lowered." It has a sacking bottom, in which is a hole for "introducing a bed pan beneath, when " required." This frame is in parts which are hinged together, and ropes over block pullies fastened to a bar across the middle of the tester frame raise it in parts when required. These ropes are fixed to rollers which are attached to the bedstead.

[Printed, 6*d*. Drawing. See London Journal, (*Newton's*), vol. 7, p. 242. Register of Arts and Sciences, vol. 1, p. 33; and Engineers' and Mechanics' Encyclopædia, vol. 1, p. 161.]

A.D. 1823, Nov. 11.—N° 4860.

GAWAN, Thomas.—"Certain improvements on trusses." These improvements, it is said, "apply more particularly to the patent "trusses" of Philip Pindin, described in No. 4359, Old Law, and they are said to consist "in a more efficient way of keeping "the same to its situation." This is done by substituting for the thigh belts, described in No. 4359, an under-strap, adapted to pass between the thighs, broad at the hindermost part, and forked or divided into two branches, the extremities of which are connected with the hind part of the body belt; the "under-"strap passes between the thighs, and rises in front sufficiently "to be buckled or buttoned upon the outside of the pad." In some cases, instead of the above arrangement, a "kind of casing "or stays," fitting the "form of the upper part of the body of the "patient" are employed. These are "furnished with a number "of ribs of whalebone or other suitable elastic material," placed "in such a position as to be capable of sustaining a perpendicular "pressure." The lower end of these stays is secured by straps or otherwise, "either to the pad or the body belt." In some particular cases of umbilical or naval rupture," to "secure the pad "and the body belt from rising out of its place," "a secondary "or under body belt" is "adapted to encompass the body below "the largest or most prominent part of the abdomen." "This "secondary belt is attached by short straps, either to the pad "or to the ordinary body belt, in such a manner that it will "effectually keep the said pad from rising out of its place."

[Printed, 8*d*. Drawing. See London Journal (*Newton's*), vol. 7, p. 294.]

A.D. 1824, February 19.—N° 4901.

ADCOCK, Henry.—"An improvement in making waistbands, "or umbilical, ventral, lumbar, and spinal bandages or supporters, "to be attached to coats, waistcoats, breeches, pantaloons, and "trowsers, to be either permanently fixed or occasionally attached "and supplied." This consists "in the adaptation and applica-"tion thereto of certain combinations or sets of elastic wire helical

" springs." "The wire for the springs, of whatever metal," is " properly annealed." The springs are formed by winding the wire round a spindle by means of a lathe. They are cut into proper lengths, and are fixed in rows between cloth or other material, according to the desired shape.

[Printed, 8*d*. Drawing. See London Journal (*Newton's*), vol. 9, p. 409.]

A.D. 1824, August 28.—Nº 5001.

VALLANCE, John.—" An improved method or methods of " abstracting or carrying off the caloric or fluidity from and " congealing water (or it may be other liquids); also, an " improved method or methods of producing intense cold; " also a method or methods of applying this invention so " as to make it available to purposes with reference to which " temperatures about or below the freezing point may be " rendered productive of advantageous effects, whether medical, " chemical, or mechanical." This consists in causing a current of air rarefied to a high degree, and which has been freed from moisture and made quite dry, by contact with sulphuric acid, to sweep over the surface of the water to be frozen at a great velocity. "The pressure of the atmosphere being thus removed " from the water to a degree which renders it (in point of effect) " in vacuo, invisible distillation takes place from it." And " as " fast as this air leaves the surface of the water it is brought " into contact with sulphuric acid in a way that deprives it of " the vapour it carried from the water, and renders it perfectly " dry and capable of performing the same office again. In this " state of perfect dryness it is caused to sweep the surface of " the water anew, and then pass to the acid and dried again, " and so on during pleasure." "In consequence of this it " becomes a vehicle by which vapour and consequently heat is " carried off from the water to a degree that congeals it with " rapidity." A metal cylinder is employed strong enough to admit of a vacuum being produced in it, the upper part of which is rendered a pump. The top of the cylinder is fixed air tight; in its centre is a stuffing box for the piston rod of the pump to work air-tight through From close to the top of this cylinder is a large pipe leading into near the bottom of a second strong cylinder, whilst a similar pipe leads from the bottom of the first cylinder into the top of the second cylinder. The second cylinder must be lined throughout with lead to defend it from the action of the sulphuric acid, an arrangement for which is made near the bottom, so that the air entering in at the bottom of this cylinder may be dried in passing through it upwards before it passes out by the pipe from the top of this cylinder into the bottom of the first cylinder. On the piston being raised a valve admits air into the cylinder from the space below, while a valve at the same time allows air to pass from above the piston. On the piston being depressed valves allow the air to pass from below to the space above the piston a current is caused to rush between a disc or table of cast iron, on which the water to be frozen is affused, and a cone plate placed over it. This disc is fixed to a rod moving in a stuffing box so as to be turned round and also lowered as the water congeals upon it. Modifications of this apparatus are described.

[Printed, 1*s.* 2*d.* Drawings. See Repertory of Arts, vol. 1 (*third series*), p. 424; and London Journal (*Newton's*), vol. 11, p. 298.]

A.D. 1824, December 4.—N° 5048.

SUWERKROP, John Hillary.—" An apparatus or machine " which I denominate 'a thermophore,' or a portable mineral or " river water bath and linen warmer, and also for other apparatus " or machines connected therewith for filtering and heating " water." This consists of a carriage, " with a body hung upon " springs, with two cisterns or tanks in the lower part of it, to " hold or contain hot and cold water, and with a floor above, sur- " rounded with a railing, to contain, one, two, or more portable " metallic baths; it is also provided with a closet or closets to " hold the linen warmers in," and " also a shelf to lodge the water " pails or buckets on."

The filtering apparatus claimed consists of a " spiral coil or coils " of horsehair cord," applied as follows :—A vessel has a partition in it, dividing it into an upper and lower vessel; this has two false bottoms perforated with holes, underneath which the coils of horsehair are fixed; upon each of the false bottoms are layers of gravel, &c., of different degrees of fineness. The water is delivered from a reservoir by means of a pipe at the lower part of the vessel, and, filtering upwards, passes off at the top of the vessel. The apparatus for heating the water consists of a wooden conical-shaped vessel, having within it a stove or fire-place terminating above in a spherical head united to the stove by a neck, from which neck two copper tubes or flues diverge, one on each side, first downwards and ultimately upwards in spiral curves through the water. The spherical head of the stove for heating the water is claimed, as is also the linen warmer, consisting of a wooden vessel "having a metal one fixed within it, having a space "around and beneath it to be filled with hot water." The water pails or buckets have a rim or ring surrounding their bottom part to "catch and retain any water which might otherwise be spilt, and this arrangement of bucket is likewise claimed.

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 11, p. 4. Register of Arts and Sciences, vol. 3, p. 305; and Engineers' and Mechanics' Encyclopædia, vol. 1, p. 501.]

A.D. 1824, December 18.—N° 5061.

WEISS, John.—"Certain improvements on exhausting, inject-"ing, or condensing pumps or syringes, and on the apparatus "connected therewith, and which said improvements are appli-"cable to various useful purposes." These consist "in convert-"ing the exhausting pump or syringe into an injecting or con-"densing pump or syringe, or the contrary, as may happen to be "the case, by the action of the handle of the piston upon move-"able stop-cocks, or turning plates answering the same purpose, "and either by the action of the hand in working the piston, or "by the mechanism connected with the piston." In one syringe a lever or handle is attached to a three-way stop-cock, from which a wire passes through guide holes made at each end of the body of the syringe, and afterwards passes down through a cap, entering some way into the interior of the cylinder, so that the piston when drawn up may act upon it, and cause the lever to be raised, "so as to turn the horizontal plug of the cock one quarter "round;" a circular plate is affixed to the piston rod below the handle, "which, upon the descent of the piston, strikes upon the "wire," and "brings the plug of the stop-cock to its former "position." Other syringes are described, which are worked by turning the vertical plug of a three-way stop-cock; or, instead of the vertical three-wayed cock, is an arrangement "of two fixed "flat circular plates with apertures in them, and another plate "turning within or between them."

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 11, p. 247.]

A.D. 1825, February 26.—N° 5112.

DE METTEMBERG, Chevalier Joseph.—"A vegetable, "mercurial, and spirituous preparation, which I denominate

" quintessence anti-psorique, or Mettemberg's water, and also a " particular method of employing the same, by cutaneous absorp- " tion, as a specific and medical cosmetic." The anti-psorique, or Mettemberg's water, is composed of the following substances, mixed in certain proportions and manner :—" Deuto-chlorito of " mercury or corrosive sublimate," pure water, " vegetable " spirituous infusion, which will be herein-after described," and " nitric alcohol (nitrous ether) highly rectified." The vegetable spirituous infusion is made by digesting in a certain manner " dried leaves of wormwood, of sage, of wild mint, or mentas- " trum, of calamut or baum of thyme picked clean, dried flowers " of lavender, of camomile, of elder, dried roots of gentian, of " male fern, of saponaria or soapwort," " brandy, of full proof " strength, or from 18 to 19 degrees above 0.192 ounces, or six " French litres."

The method of employing " the anti-psorique or Mittemberg's " water," is as follows :—" Having been well shaken, two or three " ounces " are poured into a basin, and the " patient should dip " the inside of his hands into it, and wash his limbs (from the " shoulders to the fingers, and from the hips to the extremities " of the toes, including the soles of the feet) all over, until the " whole dose be consumed." In a short time " the patient must " complete the absorption by rubbing himself lightly all over " with the palm of his hands until the skin is dry." In some cases, depending however upon their nature," the anti-psorique, or " Mittemberg's water," is to be more or less diluted with water, and more or less applied, but never " otherwise than externally."

[Printed, 6*d*. No Drawings. See London Journal (*Newton's*), vol. 13, p. 90.]

A.D. 1825, March 22.—Nº 5131.

HICKS, Robert.—" An improved bath." This consists of a vessel the size and form of a slipper bath, on castors. At the bottom of the bath is a flat tube, about three inches deep, extending over the bath within about an inch and a half from the sides. A flue is attached to one end of this tube, and passes through a corresponding one that is affixed to the chimney board which is fitted closely into the fireplace opening. At the other end is an opening into the tube. Six or more small wells or cups are sunk or let through the upper part of the tube nearly to the bottom of the same, of about two inches diameter, to carry off the caloric more quickly at the end furthest from the flue; there is also a chamber extending the breadth of the tube, five or six inches wide, and about one inch deep, capable of containing two quarts of fluid. At the side of the bath is a round vessel that will hold two quarts of fluid, with a pipe leading into this chamber. Above the flat tube is placed a perforated piece of wood, forming a false bottom. About sixty gallons of cold water are put into this bath," and three pints of spirits of turpentine into the round vessel, and let some turpentine pass into the above chamber, and set fire to it, and as it burns the turpentine should gradually flow from the round vessel into the chamber. In fifteen minutes the water can be heated 98° F. Before the open tube is a blower. Different fluid combustibles may be used, but turpentine is preferred. When carburetted hydrogen gas is employed "Gordon's lamp" is used, with an extended burner passing into the chamber. When a medicated fluid is used, the bath is wood, and in place of the false bottom is a permanent one, with only a few perforations, so that they may be readily closed with plugs water tight, so that the fluid surrounding the tube under this wooden bottom may be drawn off, otherwise it might act on the tube. A tap at the bottom draws off the medicated fluid, which "may be immediately returned into the " bath, and thus the action of the medicated fluid only goes on " while the bath is heating, and consequently the same fluid may " be employed several times."

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 13, p. 132; and Register of Arts and Sciences, vol. 1 (*new series*), p. 233.]

A.D. 1825, July 16.—N° 5215.

WILLIAMS, Thomas Robinson.—"An improved lancet." This consists of an upper part, which works up and down in a lower part by means of an adjusting screw; on this lower part is fastened a thin elastic plate, which adjusts itself to the thickness of the lancet blade. In the upper part is a watch spring fixed at one end, and attached to the other is a plate turning on its own centre; there are notches or dents in this plate, and those notches are acted upon by a catch, which in its turn is acted upon by a spring; the lancet blade is attached to the above plate by a screw pivot. By moving round the plate the catch takes first into one notch and then into another; the adjusting screw is now employed to regulate the depth of the incision required; after which, by the pressure of a stud, the catch is disengaged from the notch, and the watch spring acting upon the plate will cause it to fly partly round, and move the lancet point so far; "if this be done over a "vein, the operation of bleeding will be performed."

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 2 (*third series*), p. 400; and London Journal (*Newton's*), vol. 12, p. 144.]

A.D. 1825, July 16.—N° 5219.

DE LA FONS, JOHN PALMER.—"An instrument for extracting, "and method of fixing teeth." "The instrument for extracting "consists in combining the principles of the paces or forceps and "the German key in one and the same instrument." One part of the forceps consists of "the claw, similar to the claws of the "common paces or forceps," and "the other of a bolster, similar "in its use to that of the German key, but differently applied, "having a screwed hole in it, which fits upon a screw affixed "to the opposite jaw of the paces, so that it can be raised or "lowered, or turned into any required position in use, and so as "to take a higher or lower purchase upon the tooth, according to "the will of the operator. A number of modifications of this "forceps are detailed."

The "method of fixing teeth chiefly consists in the introduc-"tion of double springs in place of single ones as usual." These "are made to cling around the smaller parts of the natural or "fixed teeth."

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 3 (*third series*), p. 306; and London Journal (*Newton's*), vol. 14, p. 125.]

A.D. 1825, August 18.—N° 5243.

SHOOLBRED, ANDREW.—"Certain improvements on, or a "substitute for, back stays and braces for ladies and gentlemen, "chiefly to prevent relaxation of the muscles." These consist in the application of spiral and other springs to back stays and braces for ladies and gentlemen, composed of flexible materials. The springs are either placed in rows horizontally and parallel to each other, or they may be placed obliquely "or in any other "direction, suited to the particular cases of weakness or deformity "to which they may be applied."

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 14, p. 195.]

A.D. 1825, September 15.—Nº 5255.

LUKENS, Isaiah.—“ A surgical instrument for destroying the “ stone in the bladder without cutting, which he denominates “ ‘lithontriptor.’ ” This is said to be an improvement upon an instrument of Mr. Civiale, of Paris. Mr. Civiale's instrument, it is stated, was a cathetor, sound, or tube of silver, &c., “through “ which is introduced a second tube formed of steel, terminated “ by three curved elastic branches or prongs, which remain “ closed so long as they continue in the exterior tube, but when “ pushed out, open and form a kind of cage in which the stone is “ made to enter, and which is then shut upon it by drawing into “ the exterior tube again. When the stone is thus engaged, “ drills, files, &c. are introduced through the tubes, and by their “ means the stone is destroyed.” The improvement upon this is adapting to the elastic branches or prongs “ fine springs of steel “ or other metal, which are fastened at one end to one of the “ branches, and pass across to an opposite branch, through “ small eyes or holes, then pass along the interior of the tube ” to the handle. When the stone is made to enter, the springs are drawn, and the stone destroyed as above. In another arrangement of the springs “ they are attached at one end to a small “ ring by a hinge or otherwise, corresponding in number to the “ branches or prongs of the basket forceps, the extremity of “ which each prong is provided with a small eye. The springs “ pass through those eyes, and into the interior of the tube, and “ then is managed as above described in the first arrangement of “ the springs. This instrument may be curved, should it be “ wanted for withdrawing small calculi through the mithra “ (urethra ?) .”

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 2 (*third series*), p. 444; also, vol. 4 (*third series*), p. 262; and London Journal (*Newton's*), vol. 13, p. 251.]

A.D. 1826, February 11.—Nº 5332.

WARREN, William.—“ Certain improvements in the process “ of extracting from the Peruvian bark medicinal substances or “ properties, known by the name of quinine and cinchonine, and “ preparing the various salts, to which these substances may serve “ as basis.”

[No Specification enrolled.]

A.D. 1826, February 18.—N° 5336.

WHITLAW, CHARLES.—" An improvement or improvements in " administering medicine by the agency of steam or vapour." These are said to be the means described of so doing " to the " whole external surface of the body of the patient, whilst they " are also inhaled by the lungs, and received into circulation;" also, " the perforated vessel into which the herbs or vegetables " are put, and its application to the specific object; also the " construction and adaptation of a three-wayed cock, by which " the steam or vapour can either be conveyed at once into the " basis of the tent, or into a perforated vessel;" and, " lastly, " the metallic cover of the basis, by which the steam or vapour " is equally distributed throughout the tent." The medi- " cines consist of vegetables collected in their native places of " growth, and carefully prepared by drying and packing," which is described. But occasionally freshly gathered vegetables are employed. The steam or vapour employed " in administering " vegetables as medicines" can be produced " in any of the " usual and well-known methods;" but preference is given to a boiler described, which is oval-shaped, " for the sake of placing " the greater part of the water above the fire." The steam or vapour is conveyed through a pipe at the top, having a cock and a turning joint into the basis of a tent. The basis is a wood chest, the lid of which is perforated with many holes, and covered with a perforated metal plate. The steam or vapour may be made to pass through a three-way cock, first into a perforated vessel containing the vegetables, placed underneath the perforated basis. A plug with a hole cut through it, worked by a handle, opens or shuts either way of the cock, according as the steam or vapour is required to pass through the perforated vessel with the vegetables first, or pass directly under the perforated basis of the tent.

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 3 (*third series*), p. 420; and London Journal (*Newton's*), vol. 14, p. 330.]

A.D. 1826, April 29.—N° 5354.

KENNEDY, CHARLES.—" Certain improvements in the appa- " ratus used for cupping." These consist, first, of a " graduated " cupping receiver, for the purpose of receiving and ascertaining " the quantity of blood drawn into the cupping glass by means of " certain incisions made in the body." Second, a cupping glass with an aperture or groove on the upper part, "to which is fitted " a brass screw armed or bound with a piece of leather," so as to admit air "at the will of the operator." To this screw "is attached " a small brass rod, to which is fixed a small piece of sponge, tow, " or other ignitable material, to be previously immersed in spirits " of wine, to procure the rarification of the air in the said glass " upon ignition."

[Printed, 6*d.* Drawing. See Repertory of Arts, vol. 4 (*third series*), p. 188; and London Journal (*Newton's*), vol. 14, p. 193.]

A.D. 1828, January 15.—Nº 5605.

NEWTON, William.—(*A communication.*) — "An improved " surgical chair bed, with various appendages, designed for useful " purposes." This consists of certain arrangements of mechanical parts, which, being put together, form an easy chair, couch, or bed for invalids, having various pinions, racks, pullies, and levers and other contrivances, for the purpose of allowing parts of the bed or couch to be occasionally raised or lowered so as to convert it into an arm chair, or to open, raise, or remove, certain parts for the purpose of getting more convenient access to the patient in performing any surgical operation, or assisting the functions of nature, or relieving the patient from the fatigue of remaining long in one posture, by raising or lowering the end or sides of the bed and shifting parts of it. For carrying out the above there are a great many modes described, all of which are claimed, together with any variations in their arrangement.

[Printed, 1*s.* 8*d.* Drawings. See London Journal (*Newton's*), vol. 3 (*second series*), p. 156; and Rolls Chapel Reports, 7th Report, p. 127.]

A.D. 1828, January 26.—Nº 5612.

WEISS, John.—" Certain improvements on instruments for " bleeding horses and other animals." These are in the construction of spring fleams, first making them in such a manner "that " the fleam is not part of nor of one piece with the spring," but " that the spring, or the hammer acted upon by the spring, may " strike the fleam." Second, " introducing a spring or springs to " throw by reaction the fleam from the incision." This is done by cutting away a portion of the under surface of the main spring to admit the fleam to be thrown from the wound, by the reaction of a small spring coming in front of the fleam, fastened from and reaching to a little above its fulcrum. Third, " introducing a

" spring or springs to hold the fleam when it has been thrown " back by such reaction." This is done by a small spring attached to the back and near to the bottom of the main spring or hammer. Fourth, "giving a semicircular or any other portion of a circular " movement," to a fleam. On a plate are fastened a fleam and a bent lever, both moving in their own centres, and working into each other with teeth, and a spring fits into the bent lever. When it is necessary to operate, the bent lever is brought round and secured by a catch. A lever on the catch being now depressed, releases the bent lever from it, and the spring acting upon the bent lever " causes the lancet or fleam to make a semi-revolution and " make the required incision."

[Printed, 1*s*. Drawings. See London Journal (*Newton's*), vol. 7 (*second series*), p. 21.]

A.D. 1828, April 29.—N° 5643.

WATT, John James.—" That by the application of a certain " chemical agent, animal poison may be destroyed and the disease " consequent thereon effectually prevented." This consists " in " the application of chlorine (either in the state of gas, or in combination with water, forming a lotion in a state of concentration, to the genital organs of both sexes) after impure sexual " intercourse."

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol 5 (*second series*), p. 274.]

A.D. 1828, May 6.—N° 5648.

ADAMS, Thomas.—" My invented improvements on instru" ments, trusses, or apparatus for the relief of hernia or rupture." These are, first, " an additional spring, moveable at pleasure, upon " or under the usual and ordinary spring of common steel trusses, " for the purpose of regulating and adjusting the pressure of the " truss." Second, " the introduction of a graduated scale by " which the amount of the increase or decrease of pressure that is " produced is nearly shown and estimated." The additional spring may be nearly straight, and about one-third the length of the main spring ; " it is made to slide or move upon or under the " main spring, by the latter having a slit or slits made therein, " and the additional spring having a rivet or rivets," so that " it " can slide or move along such slit or slits." The divisions to be ·ked upon the strap, as denominations of weight, are obtained by

" opening the truss to the extent which it would have in wear, and " then suspending the different weights from the centre of the pad " while the aforesaid additional spring is moved into its various " positions."

[Printed, 4*d*. Drawing. See London Journal (*Newton's*), vol. 3 (*second series*), p. 260.]

A.D. 1828, December 4.—N° 5723.

DERBISHIRE, PHILIP.—" A certain medicine or embrocation " to prevent or alleviate sea sickness, which may be usefully " applied to other maladies." This is made by boiling with a certain proportion of soft water, certain quantities of crude opium, extract of henbane, mace, and mottled soap, allowing it to cool, and adding in certain proportions spirits of wine, at sixty degrees overproof, and spirit of ammonia. This is rubbed " over " the lower end of the breast bone and under the left ribs, the " latest time you can conveniently do so previous to embarkation, " and again on board as soon as you have an opportunity." If sickness continues, the application of the embrocation is continued.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 8 (*third series*), p. 741; and London Journal (*Newton's*), vol. 3 (*second series*), p. 233.]

A.D. 1829, August 20.—N° 5834.

MUSHET, JOHN.—" A certain medicine which, in the course " of his practice, he found of essential and peculiar benefit in " gouty affections of the stomach, spasms, cramps, inflammation " of the lungs, breast and bowels, beyond any other medicine or " application in like cases."

[No Specification enrolled.]

A.D. 1829, November 6.—N° 5868.

GOOCH, WILLIAM.—" Certain improvements on baths of different descriptions, which improvements are applicable to other " purposes." These are, applying apparatus to shower baths so as to combine a vapour and shower bath in one apparatus, and applying to plunge baths apparatus, so as to " combine a vapour, " shower, and plunge bath in one." At the bottom of a common shower bath is a perforated box receiving steam through a pipe leading from a boiler. On the pipe inside the bath is a cock or plug with a handle for regulating the steam, which may be done by the patient or attendant. A cloak or dress worn by the patient descends from the shoulders and hangs loosely on the bottom of the bath, it is extended by hooks or strings.

A plunge bath has two perforated plates at the bottom for distributing steam led under them by a pipe from a boiler; on this pipe is a cock or plug wlth a handle for regulating the steam. A cloak or covering hangs from the shoulders. It is supported by rods from a standard. A lever raises the shower bath to its position above. "If it is desired to medicate or perfume the "vapour, the medicinal matter or perfume may be placed between "two perforated plates, and the steam or vapour made to pass "through the same."

[Printed, 10*d*. Drawings. See Repertory of Arts, vol. 9 (*third series*), p. 334. London Journal (*Newton's*), vol. 9 (*second series*), p. 211; and Register of Arts and Sciences, vol. 5 (*new series*), p. 10.]

A.D. 1830, August 12.—N° 5981.

FORD, THOMAS.—"Certain improvements in the medicine for "the cure of coughs, colds, asthmas, and consumptions, known "by the name of Ford's Balsam of Horehound." Herb of horehound, liquorice root, and squill root, in certain proportions, with a sufficient quantity of pure water added to them, are infused "in "a still for six days more or less." So much of this infusion is taken, and spirit of wine, or the best French brandy, gum camphor, extract of Turkey opium, benjamin, extract of poppies, salt of tartar, oil of aniseed, and clarified honey, in certain proportions are added to it, and the whole digested in a close cask for "about twenty-eight days more or less." The proportions of the ingredients and time of preparation may be varied.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 10 (*third series*), p. 277. London Journal (*Newton's*), vol. 7 (*second series*), p. 327; and Register of Arts and Sciences, vol. 5 (*new series*), p. 221.]

A.D. 1831, February 21.—N° 6080.

BURGESS, RICHARD.—"A drink for the cure, prevention, or "relief of gout, gravel, and other diseases." This is distilled water. "The water should be used early after distillation, "otherwise animalculi will quickly re-form."

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 1 (*conjoined series*), p. 412; and Register of Arts and Sciences, vol. 6 (*new series*), p. 67.]

A.D. 1831, December 17.—N° 6198.

STROMBOM, Isaac.—" A medicinal composition or embroca- " tion for the cure, relief, or prevention of external and internal " complaints; which composition or embrocation may alone, or " with certain alterations, be beneficially used as an internal " medicine." This is made by mixing well together "in " suitable quantities," "spirits of wine, laudanum, best olive oil, " oil of cajuputi, spirits of hartshorn, camphor, with spirits of " turpentine."

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 14 (*third series*), p. 13. London Journal (*Newton's*), vol. 1 (*conjoined series*), p. 421; and Register of Arts and Sciences, vol. 7 (*new series*), p. 195.]

A.D. 1832, September 8.—N° 6302.

MOSLEY, John Osborne, and BELL, George.—" Improve- " ments in the making or manufacturing of pill and other boxes " from pasteboard, paper, or other materials, which improvements " are applicable to other purposes." These consist "in forming " the boxes, and also their lids, by means of dies in cutting and " stamping presses," by which " pieces of cardboard or thick " paper are first cut out to the desired shapes, and afterwards are " bent up and pressed into the forms of boxes and lids of boxes. " The dies are of two kinds :—First, the cutting dies, for forming " the pieces of card or paper of which the boxes are to be con- " structed; secondly, the stamping dies, for shaping the pieces " and bringing them together into the proper forms. The cutting " dies must be made according to the shapes and dimensions of " the intended boxes. Suppose a circular box is required to be " made, of about one inch in diameter, and five-eighths of an inch " deep." First, "cut out a piece of thick paper or card, the form " of which may be described as an octagon, of about one inch and " seven-eighths across, with acute notches cut out at its angles. " From this piece the bottom and cylindrical part of the box is to " be made, by placing it in a stamping press between suitable " dies, and forcing up its edges first into a cup shape. A cylin- " drical hoop of thick paper or card, of about three-quarters of an " inch wide, and of the same diameter as the interior of the in- " tended box, is then provided, either by winding a strip of " pasted paper round a stick, or by any other convenient means,

" which hoop is to be placed within the previously formed cup, " as a lining, and must be attached to it by paste or adhesive " matter. After this the cup and lining are placed in a stamping " press between other dies, and being made to adhere firmly, " form a cylindrical box with a ledge, against which the edge of " the lid is to fit, thus producing the bottom and straight sides of " the box in one piece."

" The lid of this box is to be made from a circular disc of thick " paper or card, of about one inch and three-eighths diameter, " which is to be in like manner pressed by dies first into a dish " form, and ultimately to a true cylindrical figure, fitting exactly " on to the top of the box. The lid of the box being shallow, the " angular notches are not required to be cut out of the disc of " paper."

" An ordinary fly press " is used for performing all the various " operations of cutting and pressing in the different stages " of the manufacture of pill and other boxes.

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 2 (*conjoined series*), p. 137; and Rolls Chapel Reports, 7th Report, p. 140.]

A.D. 1832, December 17.—N° 6345.

MAW, JOHN HORNBY.—" Certain improvements in the form " and arrangement of an apparatus for injecting enemata." These are said to be to render the apparatus more portable and more commodious for use. An outer containing case has a meta lining which forms a chamber for the liquid to be used, access to which " is by a hinged cap on the top lined with leather ;" a small force pump is at the back part of the chamber, " the valve box " and delivery pipe of which are soldered to the bottom plate of " the chamber." The delivery pipe of the pump passes to a brass collar, soldered in the lower part of the front plate of the chamber, into this collar a stop-cock screws which " serves as a joint for the " injection pipe, it being attached to the plug, and having liberty " of motion through a range of a quarter of a circle by means of " a slot in the barrel of the cock." This pipe is imbedded or connected " with the front piece of the external casing, so as to " move with it when it is folded up to close the box."

[Printed, 8*d*. Drawing. See London Journal (*Newton's*), vol. 13 (*conjoined series*), p. 41.]

A.D. 1833, July 25.—Nº 6453.

PELLETIER, Joseph, and DESPREZ, Jean Adrian.—"Improvements in making or manufacturing sulphate of "quinine." This consists principally in using oils from animal, vegetable, or mineral sources, instead of alcohol, in the production of the above salt. The bark is treated with acid, and lime is added to the acid solution, which precipitates quinine and other things; this precipitate is dried and powdered, and if a volatile oil is used, oil of turpentine has been found to answer best, it is treated at once seven or eight times with the oil. But if expressed oil (fat oil) is used, any lime in the precipitate must be got rid of first, as it would form a soap with such oil. For this purpose the precipitate is dissolved in acid, and the rough quinine precipitated by ammonia, and proceeded with by the expressed oil as the precipitate above was with the volatile oil. After obtaining the quinine in rotation in either oils, the oil is treated with water made acid, in preference with hydrochloric acid. The acid water containing the quinine in solution is decanted, and an alkali added to it precipitates the quinine, which is afterwards united to sulphuric acid. Care is "taken to saturate and whiten by animal "charcoal, it is then crystallized by the method usually adopted." When the quinine is dissolved in volatile oils, it may be obtained by distilling the oil, but treating the oil by acidulated water is preferred.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 16 (*third series*), p. 201.]

A.D. 1833, September 21.—Nº 6473.

COURNIER, Louis.—"An improvement in curing certain "maladies of the head." This "consists of an instrument by "which the electric fluid is withdrawn from the head." The instrument is constructed as follows:—A glass vase or box, two inches square, one and a half inches deep, and open at top with a small hole in the centre of the bottom, has fitting the bottom of this box or vase a square piece of cork in which "are thirty-six "steel points or needles projecting from the bottom towards and "nearly to the top of the box or vase, the two sides of the cork "being covered with a thin sheet of foil of lead. From the

" surface from which the needles protrude a metallic thread or " wire is attached, and passing over to the back passes through " the hole perforated at the bottom of the glass box or vase, and " is sufficiently long to lie on the ground at the time the instru- " ment is to be tied on to the forehead when intended to relieve " the headache, with the open part of the box or vase and the " points or needles facing the part affected." "Two or more " instruments attached together and applied to the head will " more powerfully operate on the patient."

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 7 (*conjoined series*), p. 96.]

A.D. 1834, March 13.—N° 6574.

HAWKINS, John Isaac. — (*A communication from Daniel Harrington.*)—" Certain improved instruments for facilitating the " cure of disease by administrating galvanic influence into the " human body." These consists of various instruments " com- " pounded of silver and zinc or copper and zinc or any two " differently oxidizable metals or metallic alloys," adapted in shape to the various parts of the body, " some forms of these " instruments being also made into hollow vessels," holding warm water to raise the temperature of the parts of the body operated upon, sometimes the acting surfaces are indented, and the action can be intermittant. " A great number of galvanic " pairs may be formed by weaving a tissue with the warp of silver " or plated copper-wires and weft of zinc-wire," or vice versa. A tissue is formed by platting such wires together, and a great number of galvanic pairs are obtained by " cementing a mixture " of the filings of silver " and of zinc upon cloth. " In order to " render the application of the galvanic influence more sensible " the cuticle may be punctured by letting go a spring in which " are fixed from a score to a hundred " of needle points, they pass through a perforated plate of metal, " and protrude about " the one hundredth part of an inch beyond that surface of the " plate which is opposite to the surface against which the spring " presses." Batteries, &c. excited by acid fluids in any way " pairs of plates connected by wires " or " a piece of zinc held " over and under the tongue, or such as chains of alternate links " of different metals, or such as a mere string of beads of alternate

" metals worn around the neck or other part of the body," are not claimed in this invention.

[Printed, 1*s*. 6*d*. Drawings. See London Journal (*Newton's*), vol. 14 (*conjoined series*), p. 195.]

A.D. 1834, June 16.—N° 6627.

HANNAH, James Lee.—" An improvement or improvements " in surgical instruments for removing the stone in the bladder, " and enabling the patient to pass it off through the urethra." These are, First, " the curve of the cutter and of the crumbler, " being each of them formed of two entire sections, one section " moving on a joint formed by a screw or a rivet fixed into the " other section."

Second, " those sections of the instruments being formed with " edges to cut or teeth to crumble or pulverize the stone."

Third, " the groove in the handle or shaft of the instruments " for injecting the bladder."

Fourth, " the application of the elastic steel spring, by means " of which the instruments are opened and closed in the " bladder."

Fifth, " the application of the silver or other metallic tube to " keep that elastic steel spring acting properly in its place."

Sixth, " the application of a flexible steel spring, forming a " joint extending over the whole of the convex range of teeth, and " then narrowing off to pass through the tube."

Seventh, the application of " a wooden trough, screw and nut, as " means of applying power." (The steel spring which opens the instrument in the bladder is attached to the wooden screw, or a steelyard may be placed between the screw and it, to indicate the pressure exerted upon the stone to crush it when the nut is turned on the end of the wooden screw.)

Eighth, " the application of the rider to keep the hook of the " wooden screw acting properly in its place." The rider is a clip fastened over that part of the trough where the hook of the wooden screw lies.

Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 14 (*conjoined series*), p. 162.]

A.D. 1834, July 26.—N° 6650.

COLES, William.—" A certain specific or remedy for the cure, " alleviation, or prevention of rheumatic, gouty, or other affections

" arising from colds or other causes." This consists as follows :— " Sulphur of brimstone," " seneca powders, or rattlesnake " powders," " flowers or seeds of lavender," and " flowers or " seeds of thyme," are mixed together in certain proportions, and sewed between two pieces of linen or calico, &c., " the linen or " cotton being formed in the shape " required as " gloves for the " hand, scalps for the head " and " other similar devices, to fit " and to be worn externally upon the neck, back, shoulders," &c., &c. " A second covering of jean or silk, or some other sub- " stance, is sewed over and all round." These " rheumatic " bands," the ingredients in which " thus secured will retain " their strength and virtues for many years."

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 9 (*conjoined series*), p. 283.]

A.D. 1835, January 15.—N° 6746.

CHERRY, James.—" Certain improvements on bedsteads or " apparatus applicable for the ease and comfort of invalids and " others." These consist " in certain arrangements of apparatus " and machinery attached to bedsteads," &c., " by which a " greater degree of ease and comfort is imparted when the body " is in the recumbent posture, and by which the position of the " body may undergo various changes with less trouble and incon- " venience." The apparatus consists of " various rollers, straps, " drums, ratchets and quadrants," which are made to elevate different parts of the body, and by which the whole bed frame is elevated at the head. Likewise the bed sacking is attached to two cylinders, one on each side of the bed frame, and is " three " times the width of the bed frame," and so arranged that by revolving either of the cylinders the body may be made to undergo various changes. By intersecting fresh bedding with the bedding already in use, and revolving one of the cylinders outwards, " this draws the sacking over the platform, the two beds and " bedding going with it. That in use is drawn over the cylinder " on to the floor, and its place is occupied by the fresh supply " with the patient on it, he having gently turned over once during " the change." A hole in the sacking and mattrass is so arranged as to be over a bed pan ; " this is closed by a cushion " when not wanted," but, " when wanted to use, revolve either

" cylinder till the patient is placed on his side, the cushion is then " taken out and the body replaced on the back."

[Printed, 8*d.* Drawing. See Repertory of Arts, vol. 5 (*new series*), p. 149. London Journal (*Newton's*), vol. 8 (*conjoined series*), p. 361; Mechanics' Magazine, vol. 25, p. 385; and Exchequer Reports, vol. 2, p. 557.]

A.D. 1835, April 3.—N° 6805.

GILLESPIE, Robert.—" Certain improvements on trusses or " instruments for the cure of hernia or rupture." The truss described consists of a strong curved spring, terminating at one end in a neck, " which neck terminates in a broad expansion, " having holes through it." To this is attached by screws " a block of wood, preferring the wood of the poplar, having one " plane surface of a triangular shape, and tapering to an obtuse " irregular cone, having in some instances a groove in one side " for the reception of the spermatic cord; this block or rupture " head is polished smooth." " The parts and effects of this " instrument claimed to be new is the wooden pad block or " rupture head." " It is intended that the spring should be " sufficiently strong to produce inflammation, which is reversing " the object of former trusses." There is a strip of leather or thigh strap, which holds the instrument down and thus " prevents " a displacement upwards." When the parts about the abdominal " rings have become sore from the pressure," a piece of soft linen may be interposed, and in case the skin becomes irritated " the " irritated part should be bathed with cold water, or a cold and " slightly astringent solution of alum."

[Printed, 6*d.* Drawing. See Repertory of Arts, vol. 5 (*new series*), p. 360; and London Journal (*Newton's*), vol. 14 (*conjoined series*), p. 156.]

A.D. 1835, June 2.—N° 6843.

NYE, Joseph.—" Improvements in pumps and instruments or " apparatus for conveying fluids into and withdrawing them from " cavities of human and other animal bodies, part of which im- " provements are also applicable to other pumps." These are, first, combining the reservoir in which the fluid to be injected is placed " with a pump or syringe when such reservoir is so con- " structed as to form the seat or part of the seat of the person

" using the instrument.'' The pump is capable of being folded down " on the reservoir, or of standing in any direction to suit " the person using the instrument."

Second, " the application of a peculiar joint to be used for " connecting various parts of syringes, and the tubes for conveying " fluids into the cavities of human and other animal bodies, in " order to obtain a water-tight joint. The ends of two tubes are brought together, one tube having a flange in which a recess is formed to receive a flange on the other tube, a circular plate with a recess in it goes over the flanges and is secured by screws to the tubes with the recess in the flange. Or the tubes may be screwed together by forming one with a male and the other with a female screw, or they may be permanently fixed by soldering, although this is not desirable.

Third, constructing that portion of syringes which contains the valves, and which generally consists " of several pieces of castings " or tube brazed or soldered together," of " one piece of metal, " having suitable openings or ways made therein," being drilled out in the lathe.

Fourth, " certain arrangements of valves for obtaining a double " action to pumps or syringes having but one barrel." Two tubes are affixed to a plate soldered to the bottom of the barrel of the syringe; these tubes again are screwed into screws cut in the valve part. The upper part of these tubes " open into each other, and " the eduction pipe is affixed to the upper part of either of them," while from the other an induction pipe is led into the barrel of the syringe or cylinder. In the two tubes above mentioned, valves with their seats are screwed above the openings of the eduction and induction pipes, and also valves and their seats are screwed below the opening of these pipes into the two tubes.

Fifth, " producing a flexible metal tube for a stomach pump, " by means of ball and socket joints."

Sixth, " consists in the application of an air vessel to the end " of a garden engine or syringe."

By a disclaimer and memorandum of alteration enrolled August 30, A.D. 1837, the improvement claimed under the second head is strictly confined " to the application of such joints to " those syringes or small pumps only, the piston rods of which " are acted on directly by the hand employed for administering " clisters, and also such as are used for horticultural or garden

" purposes, and are held in the hand when used, such two classes " of pumps having induction and eduction ways separate from " each other."

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 21 (*conjoined series*), p. 475, for Disclaimer ; and Mechanics' Magazine, vol. 24, p. 347.]

A.D. 1836, January 23.—N° 6988.

JEFFREYS, JULIUS.—" Improvements in curing or relieving " disorders of the lungs." These consist " in applying apparatus " to collect the heat from the outgoing air, and give off such heat " to the incoming air, and thus enable the wearer to breath warm " air." Oblong cases are made to fit over the mouth, with pads, springs, and ribbons; in front of these cases is an arched frame of wire, carried by a hinge and closed by a hasp. "This wire carries " a plate of silver finely perforated, so as to have one thousand " three hundred holes in the square inch." In the lower side of the case is a sponge for absorbing the condensed breath. On each side of the case are pads which rest against the sides of the cheeks, and a strap passes round to the back of the head, when it is hooked to the opposite one. " Such is the case which holds the " oral respirator." "The operative parts of the instrument" consist " of a packet of from four to eight skeins of metallic " thread, gold, silver, or platinum, being the best material," though others may be used, " which is carefully laid over plates of " silver or other metal, about one one hundred and fortieth of an " inch thick," with " oblong perforations nearly half an inch " long and one-tenth of an inch wide over the whole surface; " the intermediate upright bars being one-thirtieth and the horizontal one-fortieth of an inch wide." "The metallic threads " are laid on the plates nearest to the mouth at one three hundredth of an inch apart, on the next at one six hundredth, and " on the front or outermost plate of the packet at only one nine-" hundredth of an inch apart." "These plates of silver above " and below make all the skeins into one firm packet. The curvature of the packet corresponds with that of the front of the " case." In an oral and nasal respirator the curvature of the packet of skeins is much greater.

Besides the above " the right to the use of metal as a conducting " substance for the above-described purpose " is claimed.

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 6 (*new series*), p. 211.]

A.D. 1836, March 8.—N° 7026.

LAWRENCE, George.—" A certain improvement in the screws " used in fastening the mouths of mounted inkstands, perfume, " liquor, and medicine bottles; also in fastening the mouths of " jars and tumblers used for paste, salve, powders, preserves, and " other purposes." This consists " in placing the screws which " tighten the top or cover on to the mouth or aperture of the jar " or bottle, together with the said top or cover, in a separate " frame attached to the mounting of the bottle or jar by a hinge " and a simple catch fastening or otherwise," or " by catch " fastenings alone, such fastenings being secured and prevented " from being undone by the pressure of the said screws upon " the mouth of the bottle."

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 8 (*conjoined series*), p. 229; and Rolls Chapel Reports, 7th Report, p. 167.]

A.D. 1836, March 17.—N° 7033.

WEBSTER, Alphonsus William.—" An instrument or apparatus to be applied to the ear to assist in hearing." This consists " of an external support to the back of the ear, in order to " cause it to project from the head, and thus be suitable for intercepting more of the vibration; and also the application of " a flexible tube into the auditory passage of the ear."

[Printed, 6*d*. Drawing.]

A.D. 1836, June 9.—N° 7112.

HULL, Amos Gerald.—(*A communication.*)—" Improvements " in instruments for supporting the prolapsed uterus." These consist of instruments to relieve and cure displacement of the " womb, and on a new principle, and different from the accepted " usages of the present surgical practice. The principle is that " of external pressure in contradistinction to all the intervaginal " means heretofore adopted. This pressure is to be effected either " singly upon the hypogastric region, or conjointly upon hypogastric and perineal regions." " The apparatus for the purpose " of obtaining the proper pressure" consists of the following parts:—" A spring; two pads, one for the belly, the other for the " back of the patient; a wedge of cork or other suitable material " to slide between the belly pad and the spring; and a perineal " strap. The spring is an elastic hoop of steel." " The back

" pad is formed by a simple plate of metal attached to the posterior end of the spring, cushioned, and only intended to allow " this extremity of the spring to rest comfortably upon the back " of the patient, and to serve for the attachment of straps." The strap named "the perineum strap," "extends from the back pad " under the bottom of the belly between the thighs in order to " its being attached to the front pad by holes upon corresponding " knobs." "This strap contains upon its inner surface a prismatic triangular-shaped wedge (called an external pessary), also " elastic, its apex looking upward and made to correspond to the " part known as the perineum, against which it is to be firmly " pressed."

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 13 (*new series*), p. 49.]

A.D. 1837, April 4.—N° 7337.

AMESBURY, Joseph.—" Certain apparatus for the relief or " correction of stiffness, weakness, or distortion in the human " spine, chest, or limbs." These are, "in apparatus as applied to the deformity or contraction," termed by the patentee " pointed toe," forming the portion at the instep in such a manner "as to enable the surgeon to pad the apparatus and " diffuse or extend the pressure produced by it in the commencement of the treatment of aggravated cases, either upon the " instep or upon the front of the lower part of the leg," also "the " alterations of form made in the part" at the shin "so as to " enable the surgeon to diffuse the bracing of the apparatus upon " the shin." In apparatus used "in the treatment of stiff or " contracted knee and elbow joints," to prevent the slipping of parts of this apparatus too readily, by making their surfaces ridged and furrowed. Placing four metal bars parallel with the thigh bone, and also with the large bone of the leg, forming a pad with its appendages, also a joint angular gap and locking bolt and several compound bandages and a frame " for turning or " bringing the distorted foot gradually into its natural posture" by means of a compound bandage so as to "alleviate or cure the " defect or deformity known by the name of clubbed foot."

" A prone inclined exercising table" is described with pullies which first cause a weight to draw up the cushion with the patient upon it and afterwards to lower it, and other arrangements of cushions, pulleys, and weights—or with a spring and lever so as to give exercise in various ways to the patient, and extend or otherwise various parts of his body.

Lastly, "a spine support," consisting of two springs which "form two standard inflexible sideways," which "convey the "weight that may be thrown upon them down to the pelvis or to "some of the bones and other parts situated below those projec-"tions;" straps are fastened on both the right and left side of these standards, and when the straps on the right side of these standards "are tightened, both of the standards are drawn to the "right side of the body," and "when the straps on the left side "of the standards are tightened the springs or standards are "drawn back again." In some instances there are several curves, "but whether the curves be one, two, three, or more, the principle "of operation is the same; the projecting parts form antagonizing "fulcra, and are acted upon by antagonizing forces."

[Printed, 2*s*. 8*d*. Drawings. See Rolls Chapel Reports, 7th Report, p. 185.]

A.D. 1837, June 1.—N° 7383.*

MILLETT, Richard Oke.—"Improvements in instruments for "extricating teeth." An instrument is described consisting of "a handle, shaft, lever, bolster, claws, and screws," and the improvements are said to be, in "the mode of combining and "constructing of the parts called the lever and bolster with the "stem of the key." The bolster is attached to the stem of the key and the lever working "in a gaff" in the bolster, is attached to it by a screw.

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 9 (*new series*), p. 72.]

A.D. 1838, January 18.—N° 7543.

HEWITT, Henry.—"A new or improved chemical compound "or medicine, to be used in the form of pills, for the cure or "amelioration of sciatica, rheumatism and gout, lumbago, ague, "and other diseases of a similar nature." These pills consist of "gum ammoniacum, garlic, and syrup of poppies," mixed together in certain proportions and in a certain manner.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 12 (*conjoined series*), p. 344.]

A.D. 1838, July 30.—N° 7752.

PAUL, Andrew.—"An improved hydraulic pump, douché, or "et d'eau, applicable to all the purposes of lavement in medical

" operations." "The pump is of the ordinary construction of " lift pumps," but is arranged in "a convenient and compact " apparatus for the bed chamber." The apparatus consists of a square box, having in the upper part a seat and the jet of the pump passing through the bottom of the pan throws the water " medically prepared " or not in any way required upon the patient sitting upon the seat.

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 14 (*conjoined series*), p. 176.]

A.D. 1838, November 6.—N° 7856.

HEBERT, Luke.—(*A communication.*)—" A new or improved " process or processes of embalming the dead, and for preserving " of corpses for anatomical purposes." For " embalming the " dead," "acetate of alumine " of a certain strength, and to which a certain quantity of arsenic has been added, is injected into the corpse by the carotid artery, certain precautions being used. Although the corpse is not after this " liable to the attacks " of insects," yet, in a dry atmosphere it dessicates, and in a moist it " becomes covered with mucors, and these fungi or mouldiness." To obviate these two evils, the corpse is dressed and " sprinkled " with a mixture of the following substances," mixed in certain proportions, namely, essence of cloves, essence of citron, essence, of cinnamon, alcoholic tincture of musc, essence of lavender spirits of turpentine, camphor, euphorbium. If necessary glass eyes are inserted, but before doing so, after absorbing the liquids by cotton, "a saturated alcoholic solution of perchlorate of mer- " cury (corrosive sublimate) is poured into the cavity. The " alcohol is then absorbed by a fresh plug of cotton, and the " cavity dried as completely as possible, and then powdered all " over with calcined alum." The other cavities in the body are powdered similarly with calcined alum.

For " preserving bodies for dissection," the bodies " should be " injected with a solution of the simple sulphate of allumine;" the strength of the solution used depends upon the length of time " it is wished to preserve a corpse."

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 14 (*conjoined series*), p. 319.]

A.D, 1839, January 29.—N° 7954.

LUKYN, William.—" Certain improvements in applying and " attaching artificial and natural teeth." These are, first, " the

" application, adaptation, and use of springs, or spring catches, " or spring fastenings, to attach or connect artificial or natural " teeth to the fang or stump, or to a metal or bone frame." In reference to this part of the Invention, it is stated that hitherto a gold pivot has been "screwed or fastened into the tooth" to be attached, and a hole drilled into "the stump remaining in the " jaw" receives this pivot," round which "a small quantity of " fine silk" has previously been wound; considerable pressure was required to push the pivot so covered into the hole, and so fasten the tooth; but this is avoided by having a spring or springs on the pivot; or a pivot with a spring is fastened to a gold plate, "and the hole or socket for receiving the spring is " made in the tooth." Sometimes "the spring bears against " a small gold pin" "which is fixed in the tooth." The spring may be made so that "the wearer can himself" replace it should it "become broken or injured." This is done as follows:—On the gold plate is "a square socket formed on its under side, and " the head of the spring catch being inserted therein, it is steadily " retained in its position by a small pin, which is passed through " the socket and head of the spring catch for that purpose."

Second, "Connecting the frames or plates of the upper and " lower jaw together by means of" "connecting pieces or small " levers" in conjunction with springs. Hitherto it is said this has been done by springs alone.

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 15 (*conjoined series*), p. 136.]

A.D. 1839, February 21.—Nº 7973.

WILLIAMS, Herbert Read.—"Improvements in trusses and " surgical bandages." These are said to be "the modes of con- " structing and applying the various parts of the apparatus to the " pads, and also the means by which the straps or bandages are " connected thereto;" and also "the modes of arranging the " different construction of shields," and "the means of attaching " the straps or bandages thereto." The "mode of attaching the " belt to the pad" is by "certain loops or rings moving on centres, and attached to the said pad by a plinth, and the requisite " pressure (if desired) is further assisted and rendered equable " by the use of elliptical springs extended over the length of the " pad plate, and interposed between it and the mechanism of the " belt (but this spring at no point touches the body." There are several modes described of securing in truss pads, "the required "inclination, vertical, oblique, or horizontal." The shields are shaped according to the part of the body to which they are to be applied, and they have on each side "a thin spring curved in-"wards to the proper form," and rivetted to the surfaces of the shields; the shields are padded, &c.; arched springs are secured across the shields, and the belts are attached as above described.

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 13 (*new series*), p. 125. London Journal *Newton's*), vol. 21 (*conjoined series*), p. 20; and Inventors' Advocate, vol. 1, p. 51.]

A.D. 1839, March 20.—N° 8008.

AMESBURY, Joseph.—"Certain apparatus for the support of "the human body." These are mostly applied to a form of corset or stays. In abdominal supports gaps are made "by cutting out "angular pieces in the lower front part of the body," and "which "can be opened or closed more or less as required in use" by an arrangement of tapes. Buckles and straps or laces fasten the support at the back. There is "an extending, contracting, and "adjustable steel busk," "to enable the wearer to accommodate "this support to the various changes of the abdomen." "In "some cases it is desirable to sustain the whole line of the human "body or trunk," this is done "by using two back springs or "standards," which, "in use, can be drawn together, or made to "operate by straps and buckles placed between them." Reference is made to the specification of a former Patent, No. 7337, Old Law, wherein lastly is described a spine support, and it is stated "that this figure is the same as is there described," "but "with these exceptions, the adjusting buckles and straps are "carried all the way up the back," and "two steel springs or "standards are employed in place of one only," and the various abdominal supports may likewise be added.

[Printed, 1*s*. Drawing. See Inventors' Advocate, vol. 1, p. 115.]

A.D. 1839, June 12.—N° 8105.

NEWTON, William.—(*A communication from M.* de Herrypon.*) —"An improved medicinal compound or ferruginous preparation, "to give tone and vigour to the human system, peculiarly appli-"cable in cases of weak digestion, and in the diseases called "'chlorosis.'" The dough for bread, biscuits, &c. is made with water, in which a given quantity of a soluble salt of iron has been dissolved, after which it is baked. The quantity of iron salt used "must depend upon the state or character of the disease to be "combated, and of the particular preparations of iron, and other "matters employed to arrest the disease or to restore the constitution to health or vigour."

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 17 (*new series*), p. 185. London Journal (*Newton's*), vol. 23 (*conjoined series*), p. 36; and Inventors' Advocate, vol. 1, p. 307.]

A.D. 1839, August 1.—N° 8179.

FERIER, Pierre Jacques.—(*A communication.*)—"Certain "improvements in the construction of vapour and hot air baths." These are, first, "a boiler or generator and flues surrounding it "are combined in one vessel, and in which the same passages "serve to convey the vapour from the boiler or generator and "the heated air from the flues."

Second, a perforated footstool "to receive vapour from the "generator, and to distribute such vapour to the feet and legs "of the patient."

Third, the application to hot-air baths of a lamp to heat a body of air in a hollow vessel placed over such lamp. An oblong lamp is shown with three wicks applied to heat the volume of air contained in a bell-shaped vessel placed over it resting in a frame, and having fixed to its upper end a pipe or pipes to conduct the hot air into the bed or where required.

Fourth, combining the apparatus described under the first head and that described under the third head so as to unite vapour and hot air in one.

If instead of a bath of vapour of water simply it is required to administer an aromatic bath the water in the generator is mixed with herbs or other vegetable or animal substances or a preparation of any such substances.

[Printed, 1*s*. 2*d*. Drawings. See Inventor's Advocate, vol. 2, p. 134.]

A.D. 1839, December 16.—N° 8320.

THOMPSON, James William.—"Improvements in the con"struction of bedsteads, which improvements are particularly "applicable to the use of invalides." These are constructing ads, "in which the patient may be brought into any position may be required, by means of racks and pinions in con-

" junction with jointed rods, which may, when necessary, be " made stiff and rigid, and prevented from bending; any one, " two, or more of such pinions being thrown in and out of gear, " and any one, two, or more of such jointed rods being rendered " stiff and rigid or jointed, as may be required."

[Printed, 1*s*. Drawings. See London Journal (*Newton's*), vol. 18 (*conjoined series*), p. 1; and Inventors' Advocate, vol. 2, p. 419.]

A.D. 1840, January 21.—N° 8349. (* *)

HALL, JAMES.—" Improvements in beds, mattresses, and ap- " paratus applicable to bedsteads, couches, and chairs." This invention consists " in certain arrangements of appendages " attached to feather beds, mattresses, &c.," and is especially intended for invalids. The bedding is composed of a straw mattress, a hair mattress, and a feather bed; in each is an aperture through which descends a conducting pan; a stuffed cushion is fixed on the top of the pan with sliders. Underneath the pan is a case which turns on castors and contains the receivers; by moving a handle to the right one receiver is placed directly below the pan, and by moving it again to the left the other is similarly placed " to receive the water which washes the pan and prevents any " smell." At the head of the bed is a chair " so formed in shape " that the whole of the person's back will rest on it." The support of the chair back " is placed into a socket fixed on the " head board, and turns on two hinged pivots fixed to the back " of the chair, which moves easily on the conductor nearer the " head board or farther from it at pleasure, as may be required " by the patient, and is so fixed by a screw pin on the support " that it will prevent any risk of the chair falling to either side." There is a cushion for the breast to rest upon with straps attached to each side of the chair, and a spring seat " which the person " may sit upon in bed." Another appendage is a bed table, the pillar of which may be raised or lowered; " the pillar is put down " by the side of the apertures and is fixed firm in a few moments " with the screw at the end of the pillar into a support on the " bed bottom." Two soft ropes are attached to the head and foot of the bed roof to assist the patient in rising up. The pan will answer all the purposes of a bidet, as it has a stopper (with a chain attached) which fits into it. The patentee makes less expensive mattresses and beds, " any one of which may be used by " itself for a bed, with an aperture for a pan with a bottom;" the pan is placed in a pocket attached to the lower side of the mattress, and when not in use is closed up with a cushion. He makes also invalid chairs with a stuffed cushion or spring bottom; in these is an aperture for a pan "which is closed up nearly with a corre- " sponding soft cushion."

[Printed, 1*s*. 2*d*. Drawings. See Mechanics' Magazine, vol. 33, p. 205 and Inventors' Advocate, vol. 3, p. 67.]

A.D. 1840, February 25.—N° 8400.

KINGDON, Richard.—" Certain improvements in apparatus " for the support of the human body, and the correction of " curvatures and other distortions of the spine of the human " body." These are, first, fixing in stays " two crutches or side " supports under the arm," secured at the waist by studs, and supported on the hips by pads, and fixed there by studs; "two " straps crossing below the bosom," from the crutches at the armpits, are fastened to two buckles secured to "two steel busks " or ribs," which are sewed into the stays, in a slanting direction, from the upper part of the hips to the bottom of the stays; another strap may be fastened to one of the busks. Second, fixing " the ordinary adjusting back bar support to stays " by means " of two steel bars, fastened in the back by "rivets and studs in " the same."

[Printed, 6*d*. Drawing. See Inventors' Advocate, vol. 3, p. 147.]

A.D. 1841, March 8.—N° 8872.

THOMSON, Antony Todd.—" An improved method of manu- " facturing calomel and corrosive sublimate." This consists in " combining chlorine in the state of gas with the vapour of " mercury." The chlorine gas is passed over the mercury heated to between 350° and 360° F., and the corrosive sublimate or calomel formed, as the case may be, "according to the quantity " of chlorine gas which is employed," is condensed in an air-tight chamber beyond the vessel in which the mercury is heated.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 20 (*conjoined series*), p. 357. Mechanics' Magazine, vol. 35, p. 250; and Inventors' Advocate, vol. 5, p. 180.]

A.D. 1841, March 29.—N°. 8904.

EVANS, George.—" An improvement or improvements upon " trusses for the relief of hernia." These are, first, the use as

" a stuffing for the pads of trusses generally" "moc-main, or " silk-cotton," the "product of the Bombax heptaphyllum, or " silk-cotton tree."

Second, "the combination of a moc-main pad with a spring " lever, or a hinged lever and spring with a triangular position " of three studs or buttons near one end of the lever, and one " button near the other end of the lever."

Third, "the combination of a moc-main pad with two spring " levers or two hinged levers and springs, applicable to the relief " of umbilical and femoral hernia."

Fourth, "the combination of a spring lever or a hinged lever " and a spring with a moc-main pad covered with caoutchouc, " for the relief of that species of hernia or protrusion of a natural " viscus called prolapsus ani."

Fifth, "the combination of a pair of lever springs, with a spiral " spring acting in a tube against a sliding stem in the construc- " tion of a truss for the relief of that species of hernia or falling " down or protrusion called prolapsus uteri."

[Printed, 10*d*. Drawing. See London Journal (*Newton's*), vol. 22 (*conjoined series*), p. 24. Mechanics' Magazine, vol. 35, p. 315; and Inventors' Advocate, vol. 5, p. 227.]

A.D. 1841, July 13.—Nº 9028.

POOLE, MOSES.—(*A communication.*)—" Improvements in steam " baths and other baths." These are first, "the mode of pro- " ducing a steam bath by the application of steam (generated " under considerable pressure within a room so arranged as to " allow of a sufficient circulation of fresh atmospheric air." The room is made steam tight, usually done by lining with lead or zinc, &c., a double glazed window admits light, an opening near the door has a shutter, more or less to close it, to regulate the sugply of fresh air into the room. On the opposite side of the room at the upper part is another opening with a shutter for regulating the letting off the steam and air from the room. The floor is wood perforated with holes to let the water away. A pipe is led from the boiler into the room, on this pipe are two nozels with stop-cocks, by which steam is passed into the room constituting the bath.

Second, "the mode of combining the use of a high pressure " steam bath in a ventilated room, with a rain douche or water " bath," and "the mode of regulating the temperature of douche "baths." Outside the room is a tank or vessel containing pure cold water, the condensed steam of a second tank or vessel, always kept boiling. Three rose heads or they may be douche nozels are screwed on to three pipes, each pipe having a communication with the two tanks or vessels above, and "these three pipes are to "allow of the person being subjected to a flow of water at three "different parts of the person at the same time." The flow of these pipes is regulated by cocks so as to vary the temperature and also the flow of the water as required. There are four inclined benches, with the canvas or bed-tick stretched tightly over them, there is another bench perforated with small holes.

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 18 (*new series*), p. 75; and Mechanics' Magazine, vol. 36, p. 76.]

A.D. 1841, September 8.—Nº 9069.

DREW, JOSEPH, the younger.—"An improved method of rolling "and cutting lozenges, and also of cutting gun wads, wafers, and "all other similar substances, by means of a certain machine "designed by me, and constructed of divers metals and woods." Among other uses it is stated to be applicable for cutting out "the "tops and bottoms of pill boxes." The rolling part of the appa-"ratus is an arrangement of three sets of rollers on an inclined plane. "The cutting apparatus and its appendages" "in some "respects resemble a printing machine." In the making of the tops and bottoms of pill boxes, the material is placed upon a plate which "is perforated with holes corresponding to the positions of "the circular cutters fixed in the table, and may be called a "frisket;" "a tympan frame," "having a leather back, also con-"nected to the table by hinge joints, folds down upon the sheet "of material," "the carriage being moved onward" by means of "a rack and pinion." "In the progress of the carriage the table "with the material is passed under a heavy pressing roller," "which is suspended by its pivots, or the ends of its axle turning "in standards" affixed to "horizontal bars." The weighted roller is raised by depressing a balance lever and weight, and by turning a pinion which acts upon a rack, "the carriage is brought "back towards the inclined plane of the roller frame."

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 24 (*conjoined series*), p. 91.]

A.D. 1841, September 20.—N° 9093.

ELAM, Alfred.—" Improvements in apparatus or instruments " for the relief and cure of procidencia and prolapsus uteri." To " support the uterus within the vagina," by an " invariable pres- " sure upon the perenium," and, " if desired, also on the abdo- " men," " an oval-shaped pad, made of cork, sponge, horsehair, " flannel, &c., is made to press on the parts by means of two " springs, one at the back and the other in the front ; these are " attached to a belt round the waist, which is further supported " by shoulder straps ;" an abdominal pad may be added. The mode of applying the springs is claimed.

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 17 (*new series*), p. 360.]

A.D. 1841, October 7.—N° 9117.

HARWOOD, John.—" An improved means of giving expansion " to the chest." This " consists in providing the shoulders with " certain artificial aids or supports." Pieces of metal or other material, or frames filled up in some way, lay along the shoulder blades, and are bent over the shoulder; to these are attached elastic bands, which again fasten to a belt round the waist. To the end of the shoulder pieces in front come two elastic bands, which fasten to the belt at each side. On each side a small extra band hangs loose " from the outer margin of the shoulder pieces, " in order to allow the wearer to re-adjust the latter easily should " they happen to be displaced by any unusual movements of the " arms."

[Printed, 6*d*. Drawing. See Mechanics' Magazine, vol. 36, p. 287. Rolls Chapel.]

A.D. 1841, December 23.—N° 9209.

BAILLIEU, William. — " Improvements in apparatus to " expand the human chest."

[No Specification enrolled.]

A.D. 1842, March 15.—N° 9296.

GREEN, Alfred.—" Certain improvements in trusses or surgical " bandages." These are, first, constructing them " with a per- " pendicular spring and concave plate" " An ogee steel spring."

Second, "fastening a perpendicular spring to the body belt of " trusses and other surgical bandages."

Third, "fastening or connecting the various parts of trusses "and other surgical bandages together by means of eyelet holes "instead of the projecting studs, buttons, screws, and other "means heretofore used."

Fourth, "connecting the perpendicular spring to the pad or "cushion by means of a loop or slide of leather, metal, or other "suitable material, by means of which the pad or cushion may "be raised or lowered as circumstances may require."

[Printed, 6*d.* Drawing. See London Journal (*Newton's*), vol. 22 (*conjoined series*), p. 199; and Record of Patent Inventions, vol. 1, p. 135.]

A.D. 1842, March 21.—Nº 9305.

PALMER, William.—"Improvements in the manufacture and "preparation of pills, and some other articles of a medicinal or "remedial nature." These are, first, "covering pills by cement-"ing them between two pieces of pasted or otherwise prepared "thin paper, or other suitable material." The pill is laid between two pieces of pasted paper, and an instrument coming down, fastens "the two pasted papers together."

Second, mixing charcoal with "pills and lozenges." "The "uses are in all cases intended to purify the breath."

[Printed, 10*d.* Drawing. See Record of Patent Inventions, vol. 1, p. 141.

A.D. 1842, June 23.—Nº 9401.

BEWLEY, Henry. — "An improved chalybeate water." 3½ ozs. sulphuric acid, "1·840 or thereabouts," are diluted with about 10 pints of water, 1 lb. of crystallized sulphate of iron is dissolved in this, and the solution brought to boiling; nitric acid of about 1·340 is added at intervals till the solution ceases to give off vapours of an orange colour, the "well-known indication" that all the iron is peroxide; this solution is poured into about 10 gallons of water, and "Liquor ammonia, fort. Lond. Pharm.," added in excess; the precipitate is collected on a filter, and well washed with water; about 8 ozs. crystallized citric acid is dissolved in about 4 times its weight of water, the temperature of the solution raised to about 160° to 180° F., and the moist peroxide of iron is gradually added until it ceases to be dissolved The strength of this citrate of iron solution is ascertained "by "evaporating a certain quantity to dryness, and weighing the "dry ferruginous salt; and it is made more palatable by mixing

" with a weak simple syrup of sugar, or a syrup flavored or
" aromatized according to taste, and in the proportion so that
" each fluid oz. may contain 13 grains of citrate of iron. About
" 1 oz. of this mixture is put into a 7 oz. bottle, and the bottle
" filled up" "with about 5 ozs. of water charged with 3 or 4
" times its volume of carbonic acid gas (by means of a soda
" water machine, such as is in common use)," and corked immediately and tightly. The water may be prepared by adding to the above citrate some alkali as ammonia, potash, or soda. Instead of citric acid, tartaric or lactic acid, alone or with potash, soda, or ammonia, may be used.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 22 (*conjoined series*), p. 470; Mechanics' Magazine, vol. 37, p. 606; and Record of Patent Inventions, vol. 1, p. 419.]

A.D. 1842, December 22.—N° 9565.

MILLER, Taverner John.—" Improvements in an apparatus
" for supporting a person in bed, or when reclining." These are
" combining certain apparatus, and applying the same to a bed-
" stead; also constructing bedsteads with a like object." These consist of a back rest, moving in various ways by arrangements of pulleys, cords, weights, and arms, and with or without an upright attachable to the bedstead.

[Printed, 2*s*. Drawings. See Repertory of Arts, vol. 2 (*enlarged series*), p. 96.]

A.D. 1842, December 28.—N° 9572.

HULL, Alonzo Grandison.—" Improvements in electrical
" apparatus for medical purposes, and in the application thereof
" to the same purposes." These are,

First, "making the opposite poles of the electrical circuit of
" different sizes for the purpose of regulating the quantity, inten-
" sity, or quality of the electrical force."

Second, "the introduction of medicine into the electrical
" circuit."

Third, "insulated conducting wires for passing the electric
" current into particular parts of the body."

Fourth, " putting particular parts of the body into a positive or
" negative state of electricity, in order to stimulate, or dissolve, or
" to form it anew."

Fifth, "varying the extents of the conducting surfaces, and "quantity of water or other fluid, or kind of fluid, or medicine, "for the purpose of modifying the electric current."

Sixth, "introducing medicine into the body by means of immersion, or partial immersion, in a bath acted upon by an electrical "apparatus."

[Printed, 4*d.* No Drawings. See London Journal (*Newton's*), vol. 23 (*conjoined series*), p. 401.]

A.D. 1843, February 11.—N° 9628.

BADGER, JONATHAN.—"Improvements in the construction of "bedsteads for invalids." These are, so "constructing and combining" them "as to obtain greater facility for varying the "position of the bedstead." The mattrass and frame of the bed are divided each into four parts, and curved plates or arcs are, together with bars, made to move these parts by means of a lever and handle. "In each of the arcs or curved plates are formed a "series of holes, and according as the stops or pins are inserted "through one or other of the holes of their respective arcs and "through the holes in the slotted bars, so will be the position the "mattrass will be caused to assume."

[Printed, 1*s.* 2*d.* Drawings.]

A.D. 1843, May 16.—N° 9730.

THOMPSON, JOHN.—"Certain improvements in bedsteads and "couches for invalids." These are "so connecting an outer "framing to a bedstead or couch that a sheet capable of supporting a patient may be distended from the outer framing over "the bed, mattrass, or cushion, and that by such means the "patient may be raised up from the bed, or the bed lowered from "the patient, without disturbing or altering his or her reclining "position, and that he or she may be safely supported upon such "sheet whilst the bed, mattrass, or cushion is being adjusted or "supplied with fresh bedding."

[Printed, 8*d.* Drawing. See London Journal (*Newton's*), vol. 24 (*conjoined series*), p. 318.]

A.D. 1843, July 13.—N° 9841.

WISE, ANN.—"Improvements in the construction of stays and "umbilical belts." These are, first, "making stays whereby they

" are made of two parts, back and front, and combined together " and fastened to the person by means of straps" and buckles which fasten at the back, and "the upper parts of the back and " front are drawn together simultaneously by a series of single " laces combined together so as all to be drawn at the same " time."

Second, "the mode of making umbilical belts whereby each " such belt is formed into two parts, back and front, and combined together by straps or other fastenings."

[Printed, 6*d*. Drawing.]

A.D. 1843, October 12.—N° 9906.

POOLE, Moses.—(*A communication.*)—" Improvements in enveloping medicines." These are, "by applying an organic " substance or membrane." It is stated gelatine has been used before but it is too easily dissolved. The membrane preferred is " from the small intestine of the sheep," &c. After cleaning and steeping in a dilute solution of sulphurous acid, the membranes are cut in pieces, and the capsules are formed by " merely drawing " a piece of the membrane" over a mandril. "When dry, a coat " of gelatine is applied, which gives substance, but this may be " dispensed with."

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 3 (*enlarged series*), p. 337; and Mechanics' Magazine, vol. 40, p. 378.]

A.D. 1843, November 21.—N° 9954.

PALMER, William. — " Improvements in the manufacture of " pills." These are, " the mode of coating pills by causing them " to be submitted to gelatine, fatty, or other suitable matter when " in a fluid state, and also the coating of pills with fine powder " when they have been previously submitted to an adhesive fluid." A machine feeds the pills into a trough divided into many compartments, each of which contains a hot solution of gelatine; they are drawn from these by the rake of a workman, drained, and drawn over into a trough of oil where they drop on to sieves, upon which they are afterwards drained and dried. After coating with gelatine they may be dropped "into dry flour, the vessel containing it constantly agitated."

[Printed, 10*d*. Drawing. See Repertory of Arts, vol. 4 (*enlarged series*), p. 16.]

A.D. 1843, December 8.—Nº 9977.

BROCKEDON, WILLIAM.—" Improvements in the manufacture " of pills and medicated lozenges, and in preparing or treating " black lead." These are, " causing the materials, when in a " state of granulation, dust, or powder, to be made into form and " solidified by pressure in dies."

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 4 (*enlarged series*), p. 285 ; and London Journal (*Newton's*), vol. 25 (*conjoined series*), p. 13.]

A.D. 1843, December 21.—Nº 9992.

L'ESTRANGE, FRANCIS. — " Improvements in surgical trusses " to prevent the descent of hernia thro' the internal as well as " the external ring." These are in " inguinal trusses," " the " curve in the body spring " " as bent to clear the sacrum, and " throw the power of the pad or rupture head on the internal " ring." Also " the pad or rupture head, which is of an irregular " oval form ; its internal structure is of two oval metallic plates, " united at one extremity by a hinge, which hinge is so constructed that it will not allow the plates being separated beyond " a certain distance ;" it has a neck fastened by two screws, " of a " flat triangular form," in which there is " a slide hole, through " which a screw passes into the pad," so " as to move the extremity of the pad upwards or downwards. Two other holes " are in the neck, so as to admit of the two screws being shifted, " and allow of the lengthening and shortening of the truss as " may be necessary." " The double inguinal trusses are on the " same principle with the single inguinal truss." " The femoral " truss is on the same construction, except with the additions of " a spiral spring of metal in the neck of the truss to admit of the " bending of the thigh on the abdomen, and on the bulging " extremity of the pad there is added a small additional pad " about the size of a pistol ball."

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 5 (*enlarged series*), p. 35.]

A.D. 1844, February 8.—Nº 10,040.

COATES, EZRA JENKS.—(*A communication*.)—" Improvements " in apparatus for facilitating the reduction of fractures and dis- " locations of bones, and for maintaining the parts in their just " position." These consist in " the combination of the rack, bar,

" and screw, or other contrivances of similar character, in and " with one case, the whole being arranged and operating in con- " nection with the forks, rolls, belts, &c. applied thereto and used " therewith " to produce " extension and counter extension;" also the above combination, " with apparatus of similar character of " the transvecture, or any instrument of like description, for the " purpose of producing lateral or transverse motion." The transvecture " described consists of a lever, to the end of which " a pin, terminating in a screw, is attached by a movable joint; " on this is screwed a femoral plate," of " the proper thickness " and curve to fit the inside of the thigh." " At about two and " one half inches from the hinge-joint on the lever," the fulcrum " is to be attached by a joint, which will permit of the requisite " movement of the lever in a direction from or towards the case." " The said fulcrum should be so fitted to the case that it may " be slipped upon or off the same at pleasure, and when on that " it may hold the transvecture firmly to the case."

[Printed, 10d. Drawing.]

A.D. 1844, May 14.—N° 10,180.

BROWNE, John.—" Improvements in apparatus for protecting " the human face from the inclemency of the weather, part of " which improvements is applicable to protect birds in cages."

[No Specification enrolled.]

A.D. 1844, June 18.—N° 10,229.

GRAHAM, Charles William. — (*A communication:*) — " Im- " provements in manufacturing pathological, anatomical, zoolo- " gical, geological, botanical, and mineralogical representations " in relief, and arranging them for use." These are as follows: —First, a cast is taken with great care in plaster of Paris, and from this, casts or moulds are taken with a composition consisting of " carbonate of lime in fine powder," " vegetable fibre to be " reduced to pulp," " animal or vegetable charcoal in fine powder " (using animal by preference)," " gelatine," " strong glue," " copal varnish," " river water," " Roman cement," " rye flour;" these are mixed together in a certain manner, and the quantity of each substance is given, although it may be varied.

Second, " fitting up and arranging " as follows:—The cast is fixed " on a board or such like surface," which has " a raised

“ border and a cover;” one or more, according to the subjects “ may be bound together into the form of a book,” and “ arranged on shelves, as so many books.”

[Printed, 4d. No Drawings. See Repertory of Arts, vol. 5 (*enlarged series*), p. 49.]

A.D. 1844, August 6.—N° 10,287.

JEFFREYS, Julius.—“Improvement in respirators.” These are said to be “certain additional improvements” in respirators described in No. 6988, Old Law. First, in “oral and orinasal “ respirators,” constructing them “in such a manner that each “ one instrument may have its power increased or decreased by “ having a portion or the whole of the operative part remove- “ able from the mountings, so that by the addition or subtraction “ of plates or layers the effect may be increased or decreased “ at will.”

Second, constructing “a nasal respirator,” “for the nostrils “ only;” it fits close to the cheeks, and is fastened by ribbons and elastic bands, “which are tied round the head.”

Third, a respirator named “the hand respirator,” which “is “ not necessarily attached or suspended in any way to the face, “ though it may be, but is chiefly intended to be held in the “ hand.”

Fourth, employing, “as occasion requires, of forms of metal “ work for the operative parts of respirators different from the “ soldered wires hitherto used.” “One of these is a fabric of the “ nature of wire gauze, but so made as to have the warp and the “ woof at unequal distances from each other, the wires or threads “ of the one being further apart than those of the other.” Ordinary “fine wire gauze,” “thin plates of perforated silver, gold, “ or pltainum, or other metal: also plates of copper or other “ readily oxydizable metal, which, after perforation, has been “ coated by the electro metallurgic or other process with silver, “ gold,” &c. Also employing the plates and wire frames which have been hitherto used, after coating as above.

[Printed, 8d. Drawing.]

A.D. 1845, January 2.—N° 10,452.

HORNE, James.—“Certain improvements in injecting instru- “ ments, which are also applicable to various pneumatic pur- “ poses.” These are, first, “the making of injecting instruments,

" such as enemas and others, with an air pump, having a piston " rod and valve," as follows:—The piston has a hollow rod which is "open both at the top and bottom." In the centre of bottom piece of the pump is a conical valve, the spindle of which, a short tube with a spiral spring coiled round it, "is exactly " under the lower termination of the hollow rod of the piston." " In working this pump the piston is first drawn to the top, when " the air in the upper portion of the barrel is expelled through " holes in the cap, and the lower portion is filled through the " hollow piston rod." The piston rod "is then closed at top " by the thumb and the piston pressed down, which causes " the air in the under portion of the barrel to press on the " valve" till it is "pushed out sufficiently far to allow of the air " which escapes" by ports in the valve spindle, "passing off " round the sides of the valve." "On the air being expelled " from the pump the resilient action of the spring immediately " restores the valve to its place."

Another form of pump is described in which the piston rod, " instead of passing quite through the body part" of the piston, terminates in the upper half of it. In the lower part of the piston is a valve "similar in all respects to that which forms the " bottom of the barrel, except that it is smaller." The piston rod works at top through a stuffing box: it is solid except at top and bottom, which are both hollow spaces, and two side ports are formed in each of these spaces.

Second, applying either of the above pumps as follows:—The pump is inserted in a case which is filled with the fluid to be injected and closed with a screw cap; from the bottom of this case the necessary injecting tubes, &c. are attached.

Third, making "injecting instruments with an air pump having " no valves and a piston and piston rod," as described. The piston rod, which is hollow with the exception of a small diaphragm near the top, is closed at both ends, but has two side ports at five different parts; it also works through stuffing boxes at the top and bottom of the barrel, and likewise "slides to and " fro through the body part (of the piston) to the extent of the " space between the two steps" fixed upon it.

Fourth, "the employment for pneumatic purposes generally of " the air pumps possessing the peculiarities before described" also of the valves.

[Printed, 10*d*. Drawing. See Mechanics' Magazine, vol. 42, p. 257.]

A.D. 1845, March 3.—N° 10,538.

TOMES, John.—" Improvements in making artificial teeth, " gums, and palates." These are, first, the mode " of obtaining " correct models of teeth, gums, and palates for dental purposes." From a model in wax a plaster cast is taken, and again a mode from this is taken in suitable materials, from which the dental parts are formed, but before doing so the model obtained from the plaster cast is tried in the mouth, and if it does not fit, " the com- " position is to be rendered soft by hot water at those parts where " it does not accurately fit, and pressed in contact with the gums " and other parts till it accurately fits, when it is to be carefully " removed and put in cold water to harden." The composition consists of " shellac, blood lac, or lac," india rubber solution, " in " spirits of turpentine or naptha, as sold by Macintosh and Com- " pany ;" also " ivory dust or plaster of Paris, or common chalk," melted together in certain proportions and in certain manner, but the composition may vary.

Second, " the forming of artificial teeth, gums, and palates, or " parts thereof, by means of machinery working, by a blunt tracing " instrument moving over a suitable model and governing the " cutting of a drill ;" such " machines have before been used for " cutting wood and other materials for various purposes." When the composition cast fits the mouth it is placed in a ring of metal, and plaster of Paris is poured over it, " in such a manner that the " surface of the model fitted to the mouth shall remain exposed, " whilst the opposite surface is imbedded in plaster, and in this " condition " the model is placed in the machine. Sometimes a cast is taken in metal from the plaster of Paris model and placed in the machine; sometimes " a plaster of Paris cast or a " metallic counterpart " is made use of and a reverse of its surface is copied.

[Printed, 1*s.* 4*d.* Drawings.]

A.D. 1845, April 7.—N° 10,588.

HAMER, James.—" Improvements in enema syringes and in " stomach and other pumps." These are " combining two pistons " on the same piston rod, such pistons working in two cylinders " of different diameter, so that during the up-stroke and the " down-stroke of the piston rod a constant flow of fluid will be " passing out of the pump."

The lower piston with valve in it, works in a cylinder " twice

" the sectional area" of the upper cylinder, in which "is a solid " piston such as is used in an ordinary force pump;" the outlet for the fluid is in the upper part of the lower cylinder. No air vessels are shown, but if necessary air vessels may be applied.

[Printed, 6*d.* Drawing. See Repertory of Arts, vol. 6 (*enlarged series*), p. 292.]

A.D. 1845, May 6.—N° 10,659.

AMESBURY, Joseph.—"Improvements in apparatus for the " relief or correction of stiffness, weakness, or distortion in the " human body." These are employing the " principle or combi- " nation of principles," to " make the unnatural projections " arising from distortions of the spine, chest, and other parts, the " fulcra of the several mechanical combinations employed for " their reduction, so that every bone of the spine and other parts " involved in the distortions herein named, can be made gradually " to bear, as may be required, its proper share of the weight " above, so far as the same may be expedient, while all external " mechanical impediments to the restoration of the natural figure " are removed by the apparatus."

"The principle of antagonism, embracing also the principle of " protection," is carried out by a series of supports and other apparatus, adapted to the cases for which they are employed. " The several apparatus, or parts of apparatus, consist of a series " of levers in various numbers, and in various forms, arranged in " various lines, and connected in various manners by metal or " otherwise, as by screws, racks, rivets, pivots, springs, catches, " buckles and straps, buttons, and button holes, so as to form " such manner of apparatus as may be required, some being made " to protect certain parts from pressure, while others act upon " other parts with any degree of force which, in the judgment of " the operator, may be safe and proper, and in any direction " in which the spine, chest, or limbs, or any or all of them, may " be made the centre or centres of such actions. The opera- " tion of the mechanical powers employed can respectively be " made more or less local, and more or less powerful, by the " use of screws, wedges, racks, pads, springs, straps, and other " auxiliaries variously placed, as the state of the parts may " indicate."

In describing the apparatus reference is made to a former Patent, No. 7337, Old Law.

[Printed, 2*s.* 10*d.* Drawings.]

A.D. 1845, August 4.—N° 10,796.

FONTAINEMOREAU, Pierre Armand le Compte de.—(*A communication.*)—" Certain improved medicines or compounds, " and for the application of a new instrument to preserve, " alleviate, and cure certain diseases; also for the machinery " employed for manufacturing the said instrument."

These are, first, "the several described preparations of mag- " nesia," by which is removed "its causticity or bitterness," its volume reduced, and its colour made "more suitable." The carbonate of magnesia is calcined, passed through a fine sieve, placed in a copper basin, mixed with "liquid sugar, until the mixture " acquires a brown or dark colour," when it is dried over a furnace, powdered, and sifted.

Second. " The manufacturing of a most efficient purgative, " resembling in taste, smell, and colour, the best brown choco- " late." Mixing cocoa, sugar, and magnesia in certain proportions, and in certain manner.

Third. " Preparing an efficient clyster casing."

Fourth. " The construction of the apparatus " for so doing.

The mould of the form required is divided into two parts, which are hinged together. The paste being poured in, a core enters "into the mould by means of a guide." After setting, the core is removed, and "the pharmaceutic preparation" is inserted into the casing, and covered with a top of gelatinous paste formed by an upper plate, with part of the surplus paste expelled by the core.

[Printed, 8*d*. Drawing.]

A.D. 1845, August 4.—N° 10,801.

ABBE, Alanson.—" Improvements in apparatus for preventing " and alleviating spinal disorders." These consist in the employment "of two or more distinct elastic framings made of metal, " wood, whalebone, or other analogous elastic material;" but metal is preferred "for various reasons, such as strength, lightness, " and durability of these framings. When two only are employed, " the upper one is made to embrace the body or back, and the " lower one the hips, and they are connected together by a joint, " which allows the body to bend over on either side. These " framings are further connected together by means of elastic " webbing, or any other convenient and suitable elastic material,

" on either side of the joint, so as to maintain the framing and " the body in an upright position," and " so to create an elastic " force that shall be constantly acting on a distorted part, so as to " bring it gradually back again to its proper position."

[Printed, 1*s*. Drawings. See London Journal (*Newton's*), vol. 28 (*conjoined series*), p. 185.]

A.D. 1845, September 4.—N° 10,825.

BEWLEY, HENRY.—" Certain improvements in flexible syringes, " tubes, bottles, hose, and other like vehicles and vessels." These are " the application of gutta percha " alone, mixed, or however prepared " to the manufacture " of the above articles, or " to the improvement of such articles after manufacture," by coating them with the same, alone or mixed.

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 9 (*enlarged series*), p. 295. London Journal (*Newton's*), vol. 31 (*conjoined series*), p. 214; and Mechanics' Magazine, vol. 44, p. 319.]

A.D. 1845, November 3.—N° 10,912.

HOSKYNS, CHANDOS.—" Certain improvements in trusses." These are, first, attaching " the front of the pads " (in preference made of wood) " to the belt, by means of moveable " circular plates," " adjustable screws," and side openings, " each " with its subordinate adjuncts."

Second. " The employment of a back pad, constructed of two " pieces, and connected to the bolt " by " two loops," " through " which the belt is passed."

Third. " The mode of buckling the two ends of the belt," whereby " the truss may be eased or contracted at pleasure," by an arrangement of sliding plates having three slots cut in them, and by " a clasp, through the open bars in which one end of the " belt is passed, and which is hooked on to a knob," which projects from the end of a spring, fastened on the opposite pad.

[Printed, 6*d*. Drawing.]

A.D. 1846, January 13.—N° 11,037.

BENBOW, THOMAS MOORCROFT.—" Improvements in fastenings for surgical and other bandages, and for articles of dress." These are, first, for bandages, &c., applying " pulleys or rollers," carried by a piece or pieces, secured to a strip of whalebone or metal, &c., "enclosed within the web or material of which the "bandage is formed." "By the arrangement of the parts the "pulleys do not project."

The second, third, and fourth part of this invention relate to hooks and eyes, "to fasten various articles of dress," and "covering wire and other springs used in making caps," &c.

[Printed, 6*d*. Drawing. See Repertory of Arts, vol. 8 (*enlarged series*), p. 175. London Journal (*Newton's*), vol. 29 (*conjoined series*), p. 99; and Patent Journal, vol. 1, p. 168.]

A.D. 1846, March 31.—N° 11,154.

MOGGRIDGE, WILLIAM HENRY.—"Certain improvements "in the plates or pieces for the roof and gums of the mouth, for "attaching thereto artificial teeth." These are, first, "constructing such plates or pieces of such form or shape that the sur"faces of the plates or pieces which are to come in contact with "the roof or gums of the mouth shall press more strongly upon "the roof or gums at or near to the edges of such pieces than in "the centre or middle parts of such surfaces."

Second. "In taking casts of the roof or gums of the mouth," "admitting air between the surface of a wax mould and the roof "or gums of the mouth to which such wax mould may have been "applied for making a cast thereof, so that the pressure of the "mould by the atmosphere to the roof or gums may be overcome "and the mould removed without bending, twisting, or distort"ing it." For this purpose holes are made "in the usual plates "or frames for holding the wax intended to be applied to the "roof or gums in such a position that holes communicating with "the atmosphere may be made through the wax to the surface of "the roof or gums in contact therewith."

[Printed, 6*d*. Drawing. See Patent Journal, vol. 1, p. 358.]

A.D. 1846, May 12.—N° 11,204.

BULLOCK, JOHN LLOYD.—(*A communication.*)—"Improve"ments in the manufacture of quinine." These are, first, preparing "purified quinoidine or chinoidine" as follows:—A certain quantity "of the residue of quinine manufacture, termed chinoi"dine," is dissolved in dilute sulphuric acid and "sulphuretted "hydrogen passed through the solution for nine hours," after which it is filtered and boiled, and a solution of carbonate of soda added; the precipitate is washed, dried, and powdered. "This "purified chinoidine may also be kept in solution in alcohol or "other vehicle, or made into saline compounds," by combining it with acids. Preparing "amorphous quinine." Chinoidine is mixed with sand and digested with two doses of ether. The fluids are distilled "by means of a water bath," and the residue dried and used as above. Preparing "basic extract of bark." "The "residue left upon treating chinoidine with ether in order to extract "the amorphous quinine, contains also valuable medicinal mat-"ter." This "is treated with a large quantity of alcohol, preferred "of 56° overproof," and the alcohol evaporated the residue is dried. Or, "the dry residue as above" is treated with dilute sulphuric acid, and the solution treated exactly "as when pro-"ducing purified chinoidine, and in making solutions and saline compounds therefrom."

[Printed, 4*d.* No Drawings. See Repertory of Arts, vol. 9 (*enlarged series*), p. 41; and Patent Journal, vol. 1, p. 419.]

A.D. 1846, May 15.—N° 11,209.

BARTLETT, HENRY VALENTINE.—"Improvements in artificial "palates, teeth, and gums, and certain machinery employed in "the manufacture thereof." These are, the manufacture of these articles "of hippopotamus or other ivory, and the fitting in "of teeth into artificial gums without pins, rivets, springs, or liga-"tures." A cast of the mouth, &c., is first made in wax; from this a plaster cast is taken, and from this cast another is taken "in some plastic material which softens and hardens readily, such "as shellac or gutta percha." Having now this model, "an "exact fac simile" is carved out "of a piece of ivory, of the par-"ticular sort before mentioned," by means of drills and bits working up and down, with at the same time "a horizontal cir-"cular motion." "The drill spindle, which is connected at top "by means of a cord, is carried over a pulley to a ratchet lever, "which again is connected by a cord to a treadle machine." "The horizontal circular motion" is given by means of a "back "spindle and pulleys." Holes are drilled for the reception of the teeth," and a flexible pipe has a nozzle end, "through which a "stream of air is blown upon the work while it is under the ope-"ration of the drill, in order to clear away the chips and dust as "produced, and to keep the ivory at a low temperature."

[Printed, 1*s.* 2*d.* Drawings. See Patent Journal, vol. 2, p. 444.]

A.D. 1846, May 19.—N° 11,211.

DUNCAN, George.—" An improved method of making com-" fits, confectionary, lozenges, and all descriptions of pan goods, " the machinery and apparatus for the manufacture of the same, " or for any other article to which the said apparatus or machinery " may be made applicable." Relating to this subject, "pill-box " bottoms" are cut out by this machinery, which consists "of " a series of hollow cutters, which are caused to ascend through " a perforated table over which the material to be cut is moved " from time to time;" the materials cut out descend "through " the cutters on to an inclined plane, down which they are moved " into any suitable receiver." There is a bar or surface over the table, against which the cutters come, when they have passed through the table and through the sheet of dough or other matter on the table.

[Printed, 1s. Drawings. See Repertory of Arts, vol. 10 (*enlarged series*), p. 13; and Patent Journal, vol. 2, p. 446.]

A.D. 1846, May 20.—N° 11,213.

MARKWICK, Alfred.—(*Partly a communication.*)—" Improve-" ments in the manufacture of epithems used for medical and " surgical purposes." These are, first, "employing sponge with " suitable impermeable back surface." The sponge is cut into thin slices, and "spread evenly over a flat surface," is coated several times with a solution of "india rubber or of gutta percha."

Second, "Employing sponge combined with fibrous materials, " with suitable impermeable back surface." In this case the sponge is reduced to small pieces, in preference by a paper engine, and mixed with wool, &c., and slightly felted, and one surface coated as above.

Third, "Employing fibrous materials, so as to produce a porous " surface with suitable impermeable back."

Sometimes the epithems are punctured with many holes.

[Printed, 4d. No Drawings. See Repertory of Arts, vol. 9 (*enlarged series*), p. 34. London Journal (*Newton's*), vol. 29 (*conjoined series*), p. 344; and Patent Journal, vol. 2, p. 463.]

A.D. 1846, August 26.—N° 11,354.

WROUGHTON, Thomas.—" Certain improvements in appa-" ratus and instruments for ventilation and respiration." These are, first, for ventilation, "an arrangement of slides and louvres;"

the slides are suspended by rods to the ends of a beam, and by moving this beam the orifices are opened or shut. "For the in-" gress of fresh air into the apartment, or for the egress of over-" heated or vitiated air," causing "this arrangement of slides " and louvres to be acted upon by an increase or decrease of tem-" perature in the building or apartment." This is done by an arrangement of two bent tubes, one containing spirits of wine or other fluid, the other mercury, floating on the top of which is a piston. "As the spirit of wine or other fluid becomes augmented " in bulk by any rise of temperature, the surface of the mercury " rises in the limb" of the tube, and forcing up the piston causes the slides and beam to move, and "so open a communication " through the louvres" and "with the external atmosphere."

Second, An "apparatus or instrument to be used for respira-" tion." It consists of a flat rectangular case, containing sponge, " and perforated on its inner and outer faces" "(or, in other words, " at top and bottom) with numerous small holes, and curved to " fit the space between the lips and gums, so that it may be held " there by the mere compression of the lips; and be externally " invisible, or nearly so, when in use."

[Printed, 10*d*. Drawing. See Mechanics' Magazine, vol, 46, p. 337; and, Patent Journal, vol. 2, p. 701.]

A.D. 1846, September 3.—N° 11,364.

COLES, James.—"Improvements in apparatus for the preven-" tion and treatment of distortions of the spine and chest; also, " for treatment of diseases of the spine and other disorders where " a recumbent position of the patient is required." These improvements are in "a machine known as the prone couch, em-" ployed for the purpose of maintaining the recumbent position " on the stomach and chest either by day or night, and of various " machinery for the accomplishment of certain exercises for " strengthening and otherwise benefiting the muscles of the " back, chest, and extremities of the human body." The "prone " couch" "consists of a horizontal frame supporting a flap " which is hinged to a sloping board, in which is a moveable " foot-board. It is supported on the end of this sloping board, " and upon two legs which are united by a connecting bar." " The horizontal flap should be of an exact length, corresponding " to that of the patient, measured from the bend of the hips to " the point of the shoulder." To effect this a sliding framework is substituted in place of the simple board, and this improvement is claimed. There is “a combination of the prone couch and the “ means of performing various exercises in one machine,” which may represent “a common sofa.” “The invention of any of the “ exercises ” are disclaimed, “except as used in combination with “ this sofa.”

[Printed, 1*s*. Drawing. See London Journal (*Newton's*), vol. 30 (*conjoined series*), p. 179.]

A.D. 1846, November 19.—N° 11,455.

BROCKEDON, William, and **HANCOCK**, Thomas.—“ Improvements in the manufacture of articles where india-rubber “ or gutta percha is used.” Among a vast number of articles named are “bandages, knee-caps, ligatures, and other surgical “ apparatus.” These are made from sheets of “caoutchouc, gutta “ percha, or a compound thereof, with or without gritty and co- “ louring matters and fibrous substances,” the sheets being first vulcanized, or the vulcanizing is done “after making them up “ into such articles as may be thought most convenient.” For vulcanizing” or producing “the change,” “chloride of sulphur “ dissolved in bi-sulphuret of carbon or other fit solvent of caout- “ chouc” is preferred.

[Printed, 6*d*. No Drawings. See Repertory of Arts, vol. 10 (*enlarged series*), p. 103; and Mechanics' Magazine, vol. 46, p. 504.]

A.D. 1846, December 21.—N° 11,503.

POOLE, Moses.—(*A communication from William T. G. Morton and Charles T. Jackson.*)—“ Means and apparatus for administer- “ ing certain matter to the lungs for medical and surgical pur- “ poses.” For the purpose of producing “ insensibility to physical “ pain,” “ administering the vapour of ether, suitably mixed with “ atmospheric air, to the lungs of the patient.” The apparatus described may be varied. It consists of a bottle with pieces of sponge strung on wires suspended throughout its length, a tube passing nearly to the bottom, perforated at its lower end, admits air, and another flexible tube connected with an exit tube in the apparatus has a valve just before it fits on to the mouth; the ether is on the sponges and at the bottom of the vessel itself.

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 10 (*enlarged series*), p. 43; and Patent Journal, vol. 2, p. 578, and vol, 3, p. 125.

A.D. 1847, January 7.—N° 11,518.

THIERS, Pierre Louis Thimoté.—“ An improved instrument “ for drawing off the milk from the breasts of women, and for “ raising and protecting the nipple both before and after child- “ birth.” A bell or cup is “ put upon the breast, from which the “ milk is to be drawn out by means of a pump at the end of an “ elastic tube.” The milk passes into a reservoir, a valve opening lets it into a lower reservoir; when the valve is closed the milk “ is sucked in by the child by means of a nipple placed at the “ upper extremity of” a tube or syphon leading out of this reservoir.

[Printed, 8*d.* Drawing.]

A.D. 1847, February 24.—N° 11,590.

DARTNELL, George Russell. — “ An improved truss for “ inguinal hernia.” The truss is a short steel spring having a pad at either end, and a leather strap. The improvement is said to be “ in the small size and conical shape of the anterior or rup- “ ture pad,” also “ its being made of hard wood, solid, polished, “ and non-absorbent of perspiration;” likewise in “ the manner “ in which it is fixed to the spring, without any secondary spring, “ socket joint, or other means of self-adjustment,” and in the bend of the anterior extremity of the spring, &c.

[Printed, 6*d.* Drawing. See Repertory of Arts, vol. 10 (*enlarged series*), p. 239. London Journal (*Newton's*), vol. 30 (*conjoined series*), p. 330; and Patent Journal, vol. 3, p. 37.]

A.D. 1847, May 22.—N° 11,708.

NEWTON, William Edward.—(*A communication.*)—“ A new “ or improved instrument or apparatus for making or manufac- “ turing capsules for enclosing medical preparations or other “ liquid or solid substances.” This consists of a hexagonal frame upon which is spread a sheet of gelatinous material; “ the liquid “ to be enclosed is then poured into the cavity presented by the “ sheet of gelatinous material of which the capsules are to be “ formed, and the whole is covered over with another sheet of “ the gelatinous material, which is wetted at the edges so as to “ cause it to adhere to the under one,” a plate pierced with round holes having edges which “ rise to some extent above the body of “ the plate, so as to present the appearance of a number of tubes;”

is fitted on to this frame, after which the whole is turned over, and a plate pierced with round holes similar to the above is fixed into the hexagonal frame, and which plate by suitable pressure completes the formation of the capsules.

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 32 (*conjoined series*), p. 186.]

A.D. 1847, November 2.—Nº 11,937.

MURDOCH, JAMES.—(*A communication.*)—" An improved cap-" sule or small case for protecting matters enclosed therein from " the action of the air, and an improved material to be used in " the manufacture of the said capsules." These are, first, " making " them of two pieces, the one fitting tightly into the other, and " forming together a kind of case or cover."

Second, " the manufacture of a vegetable gelatine from Cara-" gheen moss, applicable to the construction of capsules of the " ordinary description, and also as a gum or cement."

Third, the application of this vegetable gelatine to the improved capsules described above.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 33 (*conjoined series*), p. 42; and Patent Journal, vol. 4, p. 602.]

A.D. 1847, December 8.—Nº 11,989.

HACKETT, JOHN.—" Improvements in the manufacture of pill " boxes."

[No Specification enrolled.]

A.D. 1848, April 20.—Nº 12,133.

GILBERT, HENRY.—" An improved mode or improved modes of " operating in dental surgery, and improved apparatus or instru-" ments to be used therein." These are, first, a fixed bearing, which is employed " to rest the extracting instrument on or " against." A stem is fixed on one side of the chair, which carries this bearing.

Second. An instrument consisting " of a fixed and moveable " claw, one to go on either side of the stump of a tooth. This " instrument is employed with the fixed bearing in extracting the " stumps of teeth."

[Printed, 1*s*. Drawings. See Repertory of Arts, vol. 13 (*enlarged series*), p. 16. London Journal (*Newton's*), vol. 33 (*conjoined series*), p. 344. Artizan, vol. 7, p. 13; and Patent Journal, vol. 6, p. 60.]

A.D. 1848, August 15.—N° 12,241.

TRUMAN, Edwin Thomas.—"An improved method or methods "of constructing and fixing artificial teeth and gums, and of "supplying deficiencies in the mouth." These are, first, "manu"facturing of artificial teeth and gums, and making good other "deficiencies of the mouth in connection therewith, by employing "gutta percha;" also coating the same with metal by electro-gilding.

Second, "The application of electro-gilding in the manufacture "of artificial teeth and gums, as a coating to soft materials," such as "hard wax or other matter, which may be readily "moulded."

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 13 (*enlarged series*), p. 186. London Journal (*Newton's*), vol. 34 (*conjoined series*), p. 117. Mechanics' Magazine, vol. 50, p. 187, and vol. 61, p. 38. Artizan, vol. 7, p. 184; and Patent Journal, vol. 6, p. 215.]

A.D. 1848, September 21.—N° 12,273.

ROOFF, William Brown.— "Certain improvements in the "construction of respirators." These are making them so that "the vitiated or expired air may be conducted off in a separate "channel from the in-coming air to be inspired, and thus through "the medium of its metallic channel be made to heat the pure "air on its passage to the respiratory organs of the patient." These channels are provided with valves.

[Printed, 6*d*. Drawing. See London Journal (*Newton's*), vol. 34 (*conjoined series*), p. 242. Mechanics' Magazine, vol. 50, p. 287. Artizan, vol. 7, p. 206; and Patent Journal, vol. 6, p. 246.]

A.D. 1848, October 26.—N° 12,294.

BROWN, William.—"Improvements in manufacturing elastic "stockings, and other elastic bandages and fabrics." Other elastic articles are named, and it is stated that the improvement is in "weaving them circular, and into prescribed shapes without a "seam." This is effected by a jacquard machine as detailed; "the shute must be india-rubber thread" of the required strength. The article, as taken out of the loom, is shrunk to one-third its size by hot air.

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 34 (*conjoined series*), p. 264. Mechanics' Magazine, vol. 50, p. 425. Artizan, vol. 7, p. 231; and Patent Journal, vol. 7, p. 25.]

A.D. 1848, November 23.—Nº 12,336.

NEWSON, Henry.—“An improvement or improvements in “ trusses.” A piece of steel wire of the proper length and thickness has a “pad, button, or disk,” attached to each end; it is annealed by heating in the usual manner, and bent into the required shape by some means, and when possible each leg of the spring is of the same length. When the form of the spring is obtained, the steel is hardened and tempered in the usual manner, with the exception of “about an inch at each end of the wire,” so as to leave those parts “soft, and capable of being bent “ or twisted” by the person who wears the truss, so as to adjust the pads, &c. accurately. A double truss is made of two single trusses, slightly modified, connected together by a flexible material.

[Printed, 1*s*. 4*d*. Drawings. See London Journal (*Newton's*), vol. 34 (*conjoined series*), p. 400. Mechanics' Magazine, vol. 50, p. 501; and Patent Journal, vol. 7, p. 83.]

A.D. 1848, December 2.—Nº 12,354.

COLLINS, Robert Nelson.—“Certain improved compounds “ to be used for the prevention of injury to health under certain “ circumstances.” This “ consists in combining together certain “ substances,” which, becoming moist, evolve chlorine. The substances preferred are chloride of lime and sulphate of alumina, although other salts named may be used.

[Printed, 4*d*. No Drawings. See Mechanics' Magazine, vol. 50, p. 543. London Journal (*Newton's*), vol. 35 (*conjoined series*), p. 166; and Patent Journal, vol. 9, p. 45.]

A.D. 1848, December, 21.—Nº 12,385.

FONTAINEMOREAU, Pierre Armand Le Comte de.—(*A communication.*)—“Certain hygienic apparatus and processes “ for preventing and curing chronical and other affections, and “ to prevent or stop certain epidemic diseases.” These are, first, “ the treatment of certain diseases and affections of the human “ body, by the application thereon of cold dry heat, and water “ without humidity.” This is effected by means of water-proof apparatus, into which the air or liquid is forced by means of a pump.

Second. “ The application of water-proof garments, having the “ shape of the several parts of the body;” these are double.

Third. A bed with spiral springs, with a warming stove, &c.

[Printed, 1*s*. Drawings. See Mechanics' Magazine, vol. 50, p. 618; and Patent Journal, vol. 19, p. 43.]

A.D. 1849, January 27.—N° 12,444.

BROOMAN, Richard Archibald.—(*A communication.*)—"Certain improvements in the manufacture of artificial limbs." These are, first, "giving the thigh at its lower part a spherical "shape."

Second. Combining the arm and spring with the thigh and second joint.

Third. The shaping of the foot and ancle.

Fourth. Attaching the toe piece to the foot by means of a hinge.

Fifth. A spring for actuating the toe piece and foot.

Sixth. A tendon, which is made to operate.

Seventh. The foot arrangements, independent of the thigh, piece, where amputations are made below the knee.

Eighth. "The metallic plates and bolts combining the thigh, "leg, and foot, at the articulations of the knee and ankle "joints."

[Printed, 6*d.* Drawing. See Mechanics' Magazine, vol. 51, p. 116.]

A.D. 1849, May 1.—N° 12,594.

WILSON, James.—"Improvements in trusses." These are, forming a truss "so that after ascending from the front pad the "spring passes above and rests on the hip of the wearer, and "then descends downward so as to come below the top of the "hip, and teminates at the back of the person."

[Printed, 6*d.* Drawing. See London Journal (*Newton's*), vol. 35 (*conjoined series*), p. 330, Mechanics' Magazine, vol. 51, p. 447; and Patent Journal, vol. 8, p. 82.]

A.D. 1849, May, 15.—N° 12,612.

POOLE, Moses.—(*A communication.*)—"Improvements in apparatus for drawing fluids from the human or animal body." These are, first, "in apparatus for scarifying the human or animal "body in order to draw blood therefrom;" the "cutter is tubular "and is caused to cut by rotation about an axis;" the cutter is regulated as to depth of puncture by a screw; a pulley with a cord fixed thereon gives rotatory motion, the ends of such cord pass through holes in a case.

Second, for "obtaining a partial vacuum to facilitate the "drawing of blood or fluid from the surface," using a glass cylinder with a piston, which, instead of being drawn out by the hand as usual, is drawn out by turning a screw nut or handle resting upon the cap of the cylinder, the piston rod having a screw formed upon it.

[Printed, 8*d*. Drawing. See Mechanics' Magazine, vol. 51, p. 500; and Patent Journal, vol. 8, p. 90.]

A.D. 1849, August 1.—N° 12,717.

HARRINGTON, George Fellows.—"Improvements in the " manufacture of artificial teeth, and the beds and palates for " teeth." These are, first, manufacturing "mineral teeth with " the surfaces which come next the palates or beds, without " reference to the particular mouth to which they may afterwards " be fitted, and cause the palates or beds to be made on the one " surface to correspond with the particular mouth to which the " artificial teeth are to be fitted, and the other surface thereof to " correspond with the surface of the mineral teeth."

Second, manufacturing beds and palates for teeth, and artificial palates where no teeth are required, of tortoiseshell.

Third, machinery for measuring, which is a plate carried by the lower end of three graduated uprights; another graduated plate fits on to the uprights, and shaping and moulding machinery for moulding the tortoiseshell palates, &c., consisting of an arrangement of levers.

[Printed, 1*s*. 6*d*. Drawings. See Mechanics' Magazine, vol. 52, p. 119; and Patent Journal, vol. 8, p. 273.]

A.D. 1849, November 17.—N° 12,847.

MEINIG, Charles Ludovic Augustus.—"Certain improved " modes or methods of applying galvanism and magnetism to " curative and sanatory purposes." These are, first, the employment of portable electro magnets shaped "to the part of the body " to which they are to be applied.

Second, employing "portable magnets protected from oxida- " tion by a thin coating of gold or gutta percha, &c.

Third, combining "portable magnets or electro magnets and " portable galvanic apparatuses," the fluids of the body forming " the fluid element of the galvanic apparatuses."

Fourth, "producing long continued galvanic effects" by means of portable galvanic apparatus, and by means of any combination of materials that gives a constant current without at the same time discharging gas.

Fifth, "producing magnetic effects" by "transmitting electric "currents along or around the surfaces," by means of coils of "wires."

Sixth, applying "portable magnetic apparatus" so as generally "that one polarity only of magnetism shall act on each of two "different parts" by using a chain of magnets, &c.

Seventh, "producing a long continued effect of one, or principally one, polarity only" by portable transversal magnets," or "magnets applied perpendicularly or at right angles."

Eighth, applying "galvanic currents" "described under the "third head," to "exert a magnetic influence as explained under "the fifth head."

[Printed, 1*s*. 2*d*. Drawings. See Mechanics' Magazine, vol. 52, p. 416; and Patent Journal, vol. 9, p. 105.]

A.D. 1849, November 24th.—N° 12,859.

TAYLOR, William Garnett.—"Improvements in lint and "in linting machines." These improvements are said to have for their object "the production in a more rapid and economical "manner" of lint "used chiefly for surgical and therapeutical "purposes;" but by a disclaimer entered and filed the 24th May 1850, the invention is limited to "Improvements in linting ma"chines," and four different machines are described, and nine claims are made embracing a vast number of the different parts of these machines. In two of the machines a knife or scraper is made alternately to rise from and fall upon a web, and each time as it falls the web is drawn underneath the knife, and so the pile is raised. In another machine "the linting is effected by "revolving cutters or knives," and in another, "the knife is "stationary, but the bed" on which is the web, "is made to "move to and fro under the knife."

[Printed, 2*s*. 6*d*. Drawings. See Mechanics' Magazine, vol. 52, pp. 438, 441; and Patent Journal. vol. 9, p. 89.]

A.D. 1849, December 15.—N° 12,899.

PULVERMACHER, Isaac Lewis.—"Improvements in gal"vanic batteries, in electric telegraphs, and in electro-magnetic "and magneto-electric machines." The improvements which relate to this subject are in what are termed "hydro-voltaic chain "batteries," which "are chiefly suitable for physiological and

" medical purposes." A chain is described, " each link of which " is formed of a series of zinc, copper, and cloth discs, alternately " combined and being held together by a horn rivet. These " chains are capable of being applied to any part of the body, and " when to be used they are either dipped in a very dilute acid or " in vinegar. In some cases, even the moisture exuding from " the skin may be found quite sufficient to produce the neces- " sary quantity and intensity of current."

[Printed, 4*s.* 2*d.* Drawings. See Mechanics' Magazine, vol. 52, p. 494, and vol. 53, p. 221; and Patent Journal, vol. 9, pp. 248 & 259.]

A.D. 1850, February 28.—N° 12,984.

JEFFREYS, JULIUS. — " Improvements in preventing or re- " moving affections of the chest." These consist in springs for suspending respirators to the face in the same way as " spectacles, " but stouter. Some are made to curve upwards, so as to rest " over the ears, and others to pass below the ears, and embrace " the neck; they are also made of sliding pieces." The advantage of this mode is " the quick suspension and removal they " permit."

[Printed, 8*d.* Drawing. See Mechanics' Magazine, vol. 53, p. 178; and Patent Journal, vol. 9. p. 287.]

A.D. 1850, April 15.—N° 13,040.

DINSDALE, CUTHBERT.—" Improvements in the manufacture " of artificial palates and gums, and in the mode of setting or " fixing natural and artificial teeth." These are " the manufac- " ture of hollow metal gums, and coating the same with enamel, " whereby an increased support will be afforded to the teeth, and " a close approximation (in appearance) to nature will be at- " tained." Palates are constructed in a similar manner.

[Printed, 6*d.* Drawing. See London Journal (*Newton's*), vol. 37 (*conjoined series*), p. 305. Mechanics' Magazine, vol. 53, p. 317; and Patent Journal, vol. 10, p. 44.]

A.D. 1850, July 31.—N° 13,200.

BROOMAN, RICHARD ARCHIBALD.—(*A communication.*)—" An " improvement or improvements in abdominal supports." These are, first, " two short elastic arms, S-shaped, connected with other " parts of a supporter, having a pad upon each end, one pad to " rest upon the short ribs behind the curve, and free from the

" spine, while the other rests upon the flat plate of the oscillium, " each S-plate being united at the middle to a long elastic arm by " a mortise, allowing no motion but that of sliding in or out the " long arm, and the short arm always crossing at right angles."

Second, " two long elastic arms in connexion with other parts " of a supporter, and with the S-shaped arms by a mortise and " screw bolts, these arms being so cut that when laid upon a flat " surface the edge shall be first convex, then concave, and then " straight, and formed so as to sit flat upon the person, rising " above the hips, with a point of rest about one-third of its length " from the back, and falling down in front to a pad, and by so " adjusting the shape of the arms and point of rest as to press " directly upon the hernial rings, and lift up the abdominal con- " tents towards the top of the hips."

Third, " the supporter pad, so formed as to be thicker on the " inside near its lower end and outer edge at the point of termi- " nation, or lower fastening to it of the long elastic arms, so as to " press directly on the hernial rings, the lower outer edges being " cut so as to follow the course of the groin, and the lower edge " yoked or cut convex to go above the os-pubis, thus acting upon " all those parts occupied by the abdominal rings."

Fourth, " dividing the front pad perpendicularly through the " centre, and connecting the parts by a hinge joint and by straps, " rendering the parts adjustable to any desired position."

[Printed, 8*d*. Drawing. See Mechanics' Magazine, vol. 54, p. 117; and Patent Journal, vol. 11, p. 4.]

A.D. 1851, January 31.—N° 13,484.

GAGE, Jean Paul.—" Improved chemical compounds for tissue, " bandages, wafers, and also for surgical purposes." These are composed of vegetable substances, as " resins, resinous gums, such " as india-rubber, gutta percha, and other similar substances," and of " metals having the virtue of producing electricity," " pre- " ferably copper and zinc." Three tissues are made, the 1st composed of metals in a powder, " mixed with the above vegetable " substances, and rolled into sheets." This combination is also applied to " a tissue of silk, cotton, or flax." " The first prepa- " ration is applicable to surgical medical bandages;" the second is " used to prepare the vegeto-metallic or electro-magnetic tis- " sues." The 2nd and 3rd tissues are made by laying " metals in "[illegible]," and "metals in blades or thin sheets of "[illegible] [illegible], breadth, and thickness," on the prepared tissue [illegible]. The metals are arranged in different ways, and pressure is applied. To set in action the electricity, dilute acid or vinegar may be employed, but no acid for the first tissue. Wafers are made by adding more metal raspings to the first combination, rolling it into sheets, and cutting it into discs; these are made to adhere after by heat.

[Printed, [illegible]. No Drawings. See Mechanics' Magazine, vol. 54, p. [illegible]; and Patent Journal, vol. II. p. 174.]

A.D. 1851, June 24.—Nº 13,674.

HUGHES, RICHARD EDWARD, and BROCKEDON, WILLIAM.—"Improvements in surgical instruments." These are, first, "in "surgical instruments to be introduced into passages or orifices "in cases where it is desired that parts of the instruments may "expand when within the passages or orifices." The following, or modifications thereof, are described:—A long piece of metal tubing, of the desired thickness to enter the passage, is taken, and to this is attached an end of metal (which may be either closed or open) by a flexible tube, in preference, made of vulcanized india-rubber, a rod or stem passing through the tube is attached to the point end, and fastened by a small chain at the other end, keeps the india-rubber tube extended; in this state it is introduced into the passage, and by releasing the chain the india-rubber will contract in length and expand in diameter.

Second, "In constructing and using instruments of india-"rubber to plug up gun-shot and other wounds. The most con-"venient form for these instruments is tubular, though solid "plugs may be employed" "with a short cord or string fixed to "each end." "In using such an instrument, the string or cord "at one end of the instrument would be first passed through, and "then by pulling out the india-rubber in length it would be "brought to such a diameter as readily to be drawn through the "wound, when the india-rubber would be allowed to expand (by "slackening the pull on the strings or cords), when it would "most effectually plug the wound."

Third, "In surgical instruments for relieving the bowels, "urinary organs," &c. This is effected "by means of partially "exhausted vessels or receivers," by preference, made of gutta percha. The aperture, when first using this, is fitted to the part of the person tight by immersing it in warm water, or the orifice is covered with vulcanized india-rubber. The vessel is exhausted by an air pump.

This arrangement might be applied to extract milk from cows.

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 19 (*enlarged series*), p. 215. London Journal (*Newton's*), vol. 40 (*conjoined series*), p. 106; and Mechanics' Magazine, vol. 56, p. 17.]

A.D. 1851, September 4.—N° 13,739.

FONTAINEMOREAU, PIERRE ARMAND LE COMTE DE.—(*A communication.*)—"Improvements in preserving animal sub-"stances from decay by means of a composition applicable to the "cure of certain diseases." These are, first, "the application of "metallic salts, but principally of sulphate of zinc," in a solution of about "thirty or forty degrees of Beaume aerometer," for "the "preservation of corpses or anatomic parts, and animal sub-"stances in general from decay."

Second, "The application of the said solution" diluted and "combined with emollients (linseed, marsh-mallow) for the "cure of wounds or other similar external diseases of the human "body."

[Printed, 4*d*. No Drawings. See London Journal (*Newton's*), vol. 40, (*conjoined series*), p. 273. Mechanics' Magazine, vol. 56, p. 216; and Engineers' and Architects' Journal, vol. 15, p. 111.]

A.D. 1851, October 23.—N° 13,787.

SPARKS, JONATHAN.—"Improvements in or substitutes for "laced stockings or bandages for the leg." These are, weaving elastic stockings, &c. "for the most part without seams." "The "india-rubber thread employed as weft being covered and in the "elastic state," vulcanized india-rubber thread is preferred, so that the articles are "at once woven to the size and shape desired, "requiring no subsequent application of heat." "A warp of silk "or other yarn," of "a width equal to the greatest width of the "finished article to be produced," is introduced into "a jacquard "loom;" and "in order that the successive sheds opened in the "warp may only be from time to time of the width desired," the cards employed are "punctured in such manner that parts of "the warp may for a time be out of action, when any part "of the article is of less width than the use of the whole of the

" warp would produce, and the other portions of the warp are " only called into action, and sheds opened therein as the form of " the article becomes wider and wider till it arrives at the widest, " and when the form of the article is such as to require it, then " the parts of the warp are to be again left out by the jacquard " cards not opening a shed therein.

[Printed, 4*d*. No Drawings. See Repertory of Arts, vol. 19 (*enlarged series*), p. 321; and Mechanics' Magazine, vol. 56, p. 358.]

A.D. 1851, November 22.—N° 13,827.

WEISS, FREDERICK.—" Improvements in certain surgical in- " struments, also in scissors and other like cutting instruments." These are in forceps, &c., and in scissors, &c., " and wherein the " parts or limbs move on axes." " On one limb is fixed a stud " or axis, with a large projecting head, which is so formed that " in the act of shutting it causes the limbs to be drawn or come " towards each other, and the head is so formed in respect to the " hole or passage through the other limb, that it will pass through " when the limbs cross each other at an angle."

[Printed, 8*d*. Drawing. See Repertory of Arts, vol. 20 (*enlarged series*), p. 30. London Journal (*Newton's*), vol. 41 (*conjoined series*), p. 420; and Mechanics' Magazine, vol. 56, p. 439.]

A.D. 1852, January 29.—N° 13,933.

PULVERMACHER, ISAC LEWIS.—" Improvements in galvano- " electric, magneto-electric, and electro-magnetic apparatus, and " in the application thereof to lighting, telegraphic, and motive " purposes." The improvements relating to this subject are in " hydro-electric chain batteries," as described in No. 12,899, Old Law, and in these there are six different improvements; first, " the connecting joints" are made of some strong insulating material, as horn, &c.; sometimes tubes of thin plate " are put " into the holes of the spiral elements," which tubes are set in contact with the positive and negative wires, thus forming " a " double jointed chain battery."

Second, " Hygroscopical batteries," by " preparing the wood " round which the wires are twisted, with rather a deliquescent " salt."

Third, The links " are formed with three grooves " for connecting the wires.

Fourth, "Plates of negative and positive metal," instead of twisted wire chains.

Fifth, On to pieces of wood or frames of metal, zinc and copper, are fastened, and these "are connected together by means of "rings."

Sixth, "An arrangement of portable chain battery, so contrived "that it may be insulated in its case," and on opening the case "the battery is extended over an insulating frame," and so exposed in all parts "to the action of the atmosphere.

[Printed, 1*s.* 2*d.* Drawings. See Mechanics' Magazine, vol. 57, p. 118.]

A.D. 1852, April 20.—N° 14,077.

GRIFFITHS, Robert.—"Apparatus for improving and restor- "ing human hair." These are, "arranging or combining parts "into combs, brushes, or such like instruments suitable for "passing through the hair or against the skin, so that electric "currents may be obtained when in use." "Combs and brushes "may either be made of different metals, so as to form a battery "in themselves," or they may "have batteries connected therewith "when in use."

[Printed, 8*d.* Drawing. See Repertory of Arts, vol. 21 (*enlarged series*), p. 104; and Mechanics' Magazine, vol. 57, p. 354.]

A.D. 1852, August 26.—N° 14,276.

POGGIOLI, Paul Joseph. — "An improved medical com- "pound." An ointment for the cure of neuralgia and such like disorders. It consists of the following substances, mixed in certain proportions:—Hydrochlorate of morphia, extract of belladona or attropine, "populeum ointment," "axunge, being "macerated twenty-four hours in leaves datura stramonium." "The whole scented with some drops of mint water or with "cherry water."

[Printed, 4*d.* No Drawings. See Mechanics' Magazine, vol. 58, p. 216.]

PATENT LAW AMENDMENT ACT, 1852.

1852.

A.D. 1852, October 1.—N° 65.

STOCKEN, JAMES.—(*Provisional protection only.*)—"An im-"proved plaster spatula." The construction "enables the supply "of heat to the cataplasms, &c. to be regulated." It consists "of "a suitable box or case which forms the body of the spatula, to "which is attached a hollow tube connecting the same with the "handle. The tube contains mechanism for raising or depress-"ing the heater contained in the body of the spatula."

[Printed, 4*d*. No Drawings.]

A.D. 1852, October 1.—N° 71.

COFFEY, JOHN AMBROSE.—"Improvements in apparatus for "performing various chemical and pharmaceutical operations, "hereby denominated 'Coffey's improved patent esculapian appa-"'ratus,' parts whereof are applicable to steam boilers, steam "and liquid gauges, stills, and syphons." These consist principally in a combination of apparatus for the above purposes. First, a furnace and a boiler composed of heat tubes, the smoke or heated air passing around the boiler; above which are filtering and dispensing pans, with steam jackets. Second, a safety steam and liquid gauge. "Attached to the boiler is a discharge duct," and "near it a valve is situated" "that will shut by the pressure "of the water coming from the boiler, when not counterbalanced "by opposed pressure." "To this a glass gauge tube is secured "in stuffing boxes, and at the other end of this glass tube is "another valve, which valve is shut by the pressure of the steam "from the boiler, when acting in the opposite direction to the "direction aforesaid, and not counterbalanced by an opposed "pressure." "This part of the apparatus is equally well adapted "for other purposes." Third, "a self-acting steam stirrer." "This consists of rotating arms or wheel, working in a suit-"able cylinder or case," &c. Fourth, "self-acting high pressure

" feeding apparatus." "This consists of a steam chest with " conveyance for steam to top thereof, and an inlet for water to " bottom;" also an outlet for air or steam and "an outlet at or " near the bottom " " to supply the boiler." Fifth, " evaporating " in vacuo, by means of adapting an air-tight head and its " appliances to the pan over drying closet, and having a worm " round the condenser connected with a receiver, and an oscillating " or other air-pump." Sixth, "a vessel, in which is the material " necessary to manufacture medicated waters," through which steam is kept passing," which carries the essential oil "through " a worm in condensing tub." Seventh, "providing the drawing-" off limb of the syphon below the curve with an opening to which " is to be secured air-tight an elastic or other air exhauster." Eighth, a condenser consisting "of a series of straight tubes " passing through a condensing " vessel, "the ends of these " tubes pass through orifices in the tub, and are connected " together by elbow pipes situated outside the tub."

[Printed, 10*d*. Drawings.]

A.D. 1852, October 1.—N° 139.

LEWIS, WILLIAM.—" Improvements in compounding medicines " in the form of pills." These are " rolling out the compounded " medicine " in sheets, and passing them between rollers having " corresponding indents to produce spherical pills." In these indents " is a forcer for delivering the pills."

[Printed, 8*d*. Drawing.]

A.D. 1852, October 2.—N° 190.

YOUNG, JAMES ANDERSON.—" Certain improvements in dental " operations, and in apparatus or instruments to be used therein." These relate " to improved forms and arrangements of forceps." First, constructing them with open heads. Second, " parting the " opening of the heads of the beaks at an angle with the points, " the object in most cases being that the points only should meet." Third, "angling the internal cavity of the beaks." Fourth, " bringing the beaks to a sharp angular point." Fifth, "making " an angular or other cleft in the palatial beak of forceps for " the upper molars or other beaks having the internal angled " concavity, thereby bringing the beak to two sharp angular

" points." Sixth, "constructing the beaks so as in all cases to " act only on the roots." Seventh, "making the handles and " bodies" all of one shape, the curved shape." Eighth, "separating the handles from the bodies." Ninth, "separating " the beaks from the bodies." Tenth, "certain peculiar modes of " fitting the handles and beaks" by "spring catches." Eleventh, " the insertion of small screw corrugated or serrated wedges in " roots where great decay has taken place, to prevent crushing."

[Printed, 8*d*. Drawing.]

A D. 1852, October 2.—N° 191.

STRINGFELLOW, John.—" Improvements in galvanic batteries " for medical and other purposes." These consist in making galvanic batteries for medical and other purposes "of small compound plates or bars, composed of any two simple or compound " metals, and permanently connected together, so as to form " one system, being capable of being folded" into a case. The exciting acid is on "filtering paper or other bibulous substance," or on fibres between the two metals, or held between the metals themselves by capillary attraction, or by both. The electricity is conveyed to the part required by wires covered with braid, and having metallic points at each end.

[Printed, 8*d*. Drawing.]

A.D. 1852, October 4.—N° 204.

JACOBY, Bendix Ising.—"Improvements in the means of " fixing artificial teeth." These are, "attaching of natural or " artificial teeth to a plate, by forming the same with one or more " recesses or air chambers, so that when the air contained therein " is exhausted the plate will be kept in forced contact with the " mouth."

[Printed, 8*d*. Drawing.]

A.D. 1852, October 5.—N° 227.

MITCHELL, Benjamin.—" Improvements in the construction " of artificial legs." These are "the mode of controlling the " action of the limb by the action of the hip joint." The limb is constructed, "by preference, of thin sheet metal, and from the " part below the knee in any ordinary manner." To this lower part "two curved plates, which are fitted to embrace the stump," are jointed, and besides the joint pins, "the upper and lower " parts are connected by elastic straps, which are secured to a " belt passing round the waist of the wearer." The lower end of the upper part is shaped to fit the upper end of the lower part, " and to work therein like a ball and socket attachment." The strap attached to the waist in front passes down through the upper part, along the front part of the knee, and fastening on the top of the calf behind. While the strap attached to the waist at back passes through the lower end of the upper part, and is fastened at the same place as the other strap.

[Printed, 6*d*. Drawing.]

A.D. 1852, October 9.—N° 316.

BURQ, ANTOINE.—(*Provisional protection only.*)—"Certain " instruments, apparatus, and articles for the application of " electro-galvanic and magnetic action for medical purposes." These are made "of copper and brass, and English and German " steel combined," and applied "to the human frame." The fol- " lowing articles are to be made :—" Rings," "medals," "medals " hung together by chains," "corset busk," "whipping rods," " an Indian strygil for causing friction," "metallic wadding," " armatures ;" a "bath, in which the said four metals are to be " used in a wet or dry state."

[Printed, 6*d*. Drawing.]

A.D. 1852, October 28.—N° 554.

BROWNE, JOHN COLLIS.—"The relief of individuals suffering " from pulmonary affections, and diseases of the chest." This consists in "constructing a waistcoat, or such like garment, line " or cased with flannel or other fibrous fabric, to be worn next the " person, such garment being double, and composed of air-tight " fabric or material, so that it may be inflated." "It is divided " internally into numerous compartments or cells, communicating " with each other." "It is also provided with a valve, for the " purpose of inflation, or otherwise."

[Printed 4*d*. No Drawings.]

A.D. 1852, October 30.—N° 578.

KIRBY, Edmund Adolphus.—"An improved adjusting couch, "for medical, surgical, and general purposes." "Each part is "moveable; back, front, and sides shift, while joints in the frame "admit of almost any change in position. The required move- "ment is effected by a graduated quadrant, actuated by a rack "and pinion, or other suitable means on either side of the couch. "A connecting rod is attached to this quadrant. By these "means one part of the couch may be raised and another "depressed." The legs support the frame of the couch; "within "this is a moveable frame," "upon which the mattrass or squab "is placed;" "this is made in three parts, and jointed."

[Printed, 10*d*. Drawings.]

A.D. 1852, November 15.—N° 749.

BELLFORD, Auguste Edouard Loradoux.—(*A communication.*)—(*Provisional protection only.*)—"Improvements in appa- "ratus for inhaling iodine." Three inhaling tubes are described; the first is a curved tube, resembling in shape a tobacco pipe, with its two extremities open, and with a second curve at the upper part, where the lips are applied; a small bulb is blown half-way up the stem. "Towards the centre of the lower bend a guage pipe "(graduaten) is soldered," which receives "iodine, previously "moulded in small cylinders of a certain weight." "The guage "tube is closed by an air-tight stopper;" "a suction made "with the mouth," causes the air to circulate through the inhaling tube, and "turns into vapour the lower part of the small "cylinder," of iodine, causing it to descend in the graduated tube, and thereby is ascertained, at any time, "the quantity "absorbed." The evaporation of the iodine is accelerated by warming "the lower part of the apparatus with the hand, or "otherwise." The second apparatus is on the same principle, only the air is heated on entering the tube by heating the tube with a spirit lamp. The third apparatus allows the use of "common iodine; the quantity absorbed may be known by "observing the decrease of the weight." A small basket with the iodine is attached to a rod, and is suspended in a tube open at the bottom; this rod passes through an opening in a graduated tube, above which it is attached to a slender disc, and again, this disc is attached to a spiral spring, fixed to a stopper in the tube "This disc may pass successively through the divisions of a scale "traced on the tube, so that each degree shall represent a certain "quantity of iodine deposited in the basket;" on inhaling, the air passing upwards over the basket vaporizes the iodine. In making cylinders of iodine the iodine is powdered with care and pressed in tubes.

[Printed, 6*d*. Drawing.]

A.D. 1852, November 19.—N° 790.

NICKELS, Benjamin.—"Improvements in the manufacture of "adhesive plaster." These are, employing, by preference, "plain "fabrics made in warp lace machines, but other loop or knit "fabrics may be used, or a fabric made of fleece or bats of fibres "caused to adhere together by being impregnated with the "medical adhesive matter desired to be used in making up a "plaster." The object being the combining the proper adhesive and other matters with elastic fabrics.

[Printed, 4*d*. No Drawings.]

A.D. 1852, November 24.—N° 850.

WINCHESTER, William Henry. — "Improvements in "splints." These are manufacturing "adjustable splints composed of several pieces of wood, metal, or other suitable material, united by joints, and capable of being pressed or fitted "into any desired form or shape, and of being fixed in such form "or shape by tightening of the union joints, by which the several "pieces are united."

[Printed, 8*d*. Drawing.]

A.D. 1852, November 26.—N° 886.

BRUNDAGE, Edwin Lewis.—(*A communication.*)—"Improvements in apparatus for drawing off fluids from animal bodies." These are "the combination of a breast cup, cupping or leeching "glass, with a flexible chamber," which, by "being compressed, "to exhaust the air therefrom," expands "by the force of a "spring contained therein, and which is provide with a valve or "valves, arranged so as to open as desired, to permit of the "exhaustion of the chamber, and to operate in an opposite "manner to insure suction when the cylinder shall expand."

[Printed, 6*d*. Drawing.]

A.D. 1852, December 3.—N° 944.

WOODCOCK, Page Dewing.—"An improved preparation or "pill for medical purposes, hereby denominated Page Woodcock's "wind pills." This consists of the following ingredients compounded together in certain proportions, namely, "extract of "gentian root," "extract of chamomile flowers," "powder of "extract of aloes," "powder of Turkey rhubarb roots," "powder "of Jamaica ginger roots," "powder of gum myrrh," "powder "of Castile soap," "powder of ipecacuanha roots," extract of "colocynth fruit or pulp," and "the essential oils of peppermint "and of anniseed."

[Printed, 4*d*. No Drawings.]

A.D. 1852, December 9.—N° 1007.

MATHER, William.—(*Provisional protection only.*)—"Certain "improvements in the method of spreading medicinal compounds "upon leather to be used as plasters, and in the machinery or "apparatus connected therewith." These are, "spreading re"sinous, pitchy, or other similar medicinal compounds in a semi"fluid or heated state" "by means of a heated roller." The machinery consists "of a block of the size and form of the in"tended plaster," a "plate or frame having an opening rather "larger than the block," "with a knife or bevilled edge," and "a "hollow roller heated by a moveable iron heater."

[Printed, 4*d*. No Drawings.]

A.D. 1852, December 15.—N° 1064.

CAPLIN, Jean Francois Isidore.—"Improvements in appa"ratus for preventing or curing a stooping of the head or of "the body." This apparatus consists "of two plates united with "and shaped so as to fit the neck. On each side is a small "upright supporting a cross lever, the extremities of which come, "on the one hand, under the chin, the others corresponding to "the nape of the neck, where it is connected with the second "part of the instrument, made also of two plates, pressing on the "scapulæ and fitted round the shoulders." "This part is connected and regulated at pleasure by means of straps and buckles, "clasps, or laces, and is fastened to a waistband." The "apparatus is composed of two parts," "to be used either in "connection or separately when one part is only wanted."

[Printed, 6*d*. Drawing.]

A.D. 1852, December 21.—N° 1128.

MOSELY, Ephraim.—"Improvements in the manufacture of "artificial masticating apparatus." These are, first, interposing between the gum of the wearer of artificial teeth and the plate or frame which carries the teeth, "a layer or cushion of india-"rubber," for the purpose "of preventing the unpleasant jarring "sensation." "To the upper surface of the gold plate a layer of "platinum wire gauze is attached" so as to give "a good holding "surface to the cement employed in fixing the layer of india-"rubber."

Second, "producing artificial gums" like natural gums, by affixing "to the gold plate a suitably moulded perforated plate or "wire gauze frame composed of platinum or other non-oxidizable "metal," and covering "this frame with a preparation of india-"rubber of the color of the natural gum."

[Printed, 6*d*. Drawing.]

1853.

A.D. 1853, January 5.—N° 23.

DE L'HUYNES, Gustave Paul.—"Certain improvements in "medical portative electro-galvanic apparatus." These consist in forming a battery "with a plate of red copper or any other "negative metal" with a plate of zinc, having a piece of cloth "between them saturated" with "a solution of chloride of so-"dium, hydrochlorate of ammonia, and sulphate of copper, or "other acid solution." Holes are cut "in the plates for the solu-"tion to saturate readily." "The strength of the apparatus is "doubled" by setting a copper or other negative plate "between "two zinc plates, and to have these last plates united together." Two cells are connected together and have spiral copper wire conductors and small brass plates to apply to the part required.

"An electro-galvanic truss." Eight or nine of the above cells are fixed above the spring of the truss. The brass plates, as above are inserted into the pressure cushions of the truss.

"An apparatus of six elements, as above, joined together, the "spiral wire conductors are covered with silk, with strings to "fasten the metallic conductors to their places."

A tube in the rectum is attached to the spiral wire conductor, and "a probe" is similarly attached "when the current is to "reach the bladder."

[Printed, 1*s.* 2*d.* Drawings.]

A.D. 1853, January 10.—N° 67.

SCHNEIDER, FREDERICK.—"A chair to be employed for pre-"venting sea sickness." The apparatus rests on two supports some way apart, upon which are fixed two journals on which a horizontal axle turns. This axle higher up carries "another "journal, upon which two triangular supports work, and to which "two seats are fixed; a rod passing from some way up the tri-"angular supports down through the horizontal axle, carries a "weight suspended between the two supports," "which balances "the whole apparatus and keeps it in a horizontal position." "The chairs have moveable footstands so as to be lengthened or "shortened at will by toothed apparatus." "The berths of ves-"sels," it is said, may also be supplied with reclining chairs or couches constructed on these principles of equilibrium, and a couch is described suspended upon pivots with arrangements so as to control lateral and longitudinal motion by means of lever and balance weights. "The equilibrium chair may also "be suspended."

[Printed, 8*d.* Drawings.]

A.D. 1853, January 20.—N° 143.

DE MANARA, HORACE.—(*Provisional protection only.*)—"Cer-"tain apparatus and arrangements, applicable to steamboats and "other navigable vessels, for the purpose of preventing sea-sick-"ness." "This consists in the use and application of balloons." "These balloons are attached to seats which are supported be-"neath by a ball and socket joint, and "the balloons are inflated, "with gas, by which the seats become suspended." To "pre-"vent unnecessary movement of the balloon," a "strong curved

" bar of iron or other metal is securely fixed to the sides of the " vessel," and "passes through a curved slotted piece of metal " which moves upon a grooved pulley attached to it." This " piece slides upon the curved bar. The elastic cords of the balloon are attached to this.

[Printed, 10*d*. Drawings.]

A.D. 1853, February 10.—N° 353.

NEWTON, William Edward.—(*A communication.*)—(*Provisional protection only.*)—" Improvements in instruments or apparatus for facilitating the examination of various internal parts " of the human frame." The instrument consists "of a hollow " chamber with an entrance tube at one end, and an exit tube at " the other." The " parts are principally made of metal silvered ;" in the interior is a lamp " the light of which is thrown by a combination of reflectors, through the exit tube into any part of " the body to which access can be obtained." "The apparatus " is also provided with a set of lenses " mounted " in a tube which " passes through the principal chamber, and is adjustable from " the outside by means of an external screw."

[Printed, 4*d*. No Drawings.]

A.D. 1853, February 11.—N° 365.

MURRAY, Sir James.—" Improvements in deodorizing cod " liver oil, in rendering it more agreeable and easier to use, " either by itself or mixed, and so as to be capable of being " administered in larger quantities, and with greater success." These are, impregnating the oil with carbonic acid gas ; this, it is said, may be done "in cylinders made of silver or other safe and " suitable material capable of bearing a pressure of many atmospheres." "A pressure of about two hundred pounds on the " square inch " preferred, forcing in the gas, and agitating at the same time. Various materials may be mixed with the oil, as " mucilaginous and saccharine liquors with or without an addition " of carbonate of soda or potash, all in certain proportions."

[Printed, 4*d*. No Drawings.]

A.D. 1853, April 4.—N° 794.

FINDLOW, James.—" Improvements in beds or couches for " sick persons." These are, constructing beds or couches that

" a portion or portions thereof may be moved from beneath the " patient for adapting a convenience for the performance of " operations, or for other purposes." In the framework of the bedstead, and in the mattras, are corresponding orifices; and " attached to the bedstead is a bracket, to which is fixed a " vertical rod, and upon it is mounted so as to be capable of " sliding up and down an arm," on which is fixed a table " corresponding in shape to the orifices," a cord pulley and weight moves this arm up or down. " The moveable part might be " applied and removed by hand, and secured in its place by tying " or other simple means."

[Printed, 6*d*. Drawing.]

A.D. 1853, April 4.—N° 806.

BURQ, Antoine. — " Certain instruments, apparatus, and " articles for the application of electro-galvanic and magnetic " action for medical purposes."

These are described in No. 316, A.D. 1852.

[Printed, 8*d*. Drawings.]

A.D. 1853, April 14.—N° 909.

WYBURN, Robert.—" Improvements in the construction of " easy chairs." This " consists of an easy chair, made of wood, " with moveable cushions and a reading desk, which also forms an " invalid or other table." The seat consists of a frame " crossed " with wooden strips, the side rails of which being cut crooked " and contrived to form the back legs;" to this arms are fastened; " the back of the chair is a separate piece of framework attached " to the seat by means of thumb screws." The back is placed perpendicular or otherwise by the arrangement of two straps. " Underneath the seat " is hinged another frame which turned out extends the length of the chair. The reading desk " is " formed by an arm or cross piece, through one end of which " passes a wooden screw fixing into the end of a turned upright, " which is fastened by two pins to the arm of chair, having a " flap at the other end of cross piece."

[Printed, 6*d*. Drawing.]

A.D. 1853, April 20.—N° 955.

BROOMAN, Richard Archibald. — (*A communication.*)— "Improvements in inhaling tubes." These are constructing them "in such a manner that the breath of the user shall be exhaled "under greater pressure than is exerted in the act of inhaling." The tube described is as follows :—"A short tube of silver or "other non-corrosive metal forms the mouthpiece; at the end of "this is a valve chamber, consisting of a short cylinder, open at "both ends; one end forms a seat for a poppet valve, the guide "stem of which plays within a socket in a cap, which is attached "at the opposite end of the said cylinder, the cap being fitted like "a stopper, so as to be readily taken out and replaced. Within "this cap is a small orifice," and it is through this that the breath is forced by exhaling. By "enlarging or contracting this orifice, "various degrees of pressure may be produced, and for that "purpose several caps may belong to one instrument," each having "a different sized orifice, so that this part may be very "conveniently regulated."

[Printed, 8*d*. Drawing.]

A.D. 1853, April 25.—N° 987.

O'CONNELL, Edward. — "Improvements in the mode or "method of feeding infants and invalides, and in apparatus con-"nected therewith." These consist of a vessel with a neck, having a cork or stopper through which passes a tube "nearly "to the bottom of the vessel, and through which the liquid is "drawn to the mouth by suction alone." To the outside of the vessel is fixed "an artificial teat or mouthpiece of soft, durable, "and elastic material," "having at one end a small circular bone "or ivory disc or shield to prevent the teat being drawn too far "into the mouth." When to be used at night the teat is attached to a long flexible tube instead of a short one as above, and if heat is required the vessel may be placed over a night light in a box.

[Printed, 6*d*. Drawing.]

A.D. 1853, May 18.—N° 1219.

UNDERWOOD, George.—(*Provisional protection only.*)—"Im-"provements in preparations from sulphate of iron, to be em-"ployed as medicines." A mixture composed of sulphate of iron, sulphate of magnesia, distilled water, and dilute sulphuric acid, all in certain proportions, and a certain proportion "of " disulphate of quinine may, previous to employing the acid, " be added." "Wine for children," the same as above, only in smaller doses and "with a free addition of syrup of orange peel, " lemon peel, or other like agreeable syrup." Rose and cinnamon water may be used with or instead of distilled water, and the magnesian salt omitted. A powder to be used as such, or made into pills by preparing carbonate of iron, adding sugar to it, and if required rhubarb, aromatic powder, and disulphate of quinine, " all in certain proportions."

[Printed, 4*d*. No Drawings.]

A.D. 1853, May 28.—N° 1315.

BROOMAN, Richard Archibald. — (*A communication.*)— —(*Provisional protection only.*)—" Improvements in abdominal " supporters." These are, " in the manner of constructing and " applying the pads." These pads are " of horn, shell, wood, " and other like material, and are not stuffed or cushioned." Two curved pieces of steel forming springs are " bent in such a " manner as to ride over the hips and follow the curvature of the " body; they are cushioned on the inside to prevent the edges " chafing the skin," the supporting pad " is held to an adjustable " cross bar having links by which it may be opened or closed to " adopt it to various wearers, the ends of the bars being fastened " to the steel pieces " above. To give the proper angle to the pad, an elliptical spring " is combined with the steel strap, by " which it is held to the adjustable cross piece." The steel springs are prevented from dragging upon the hips; the back is made to take the strain at several points as follows:—Between the two curved pieces of steel is a bar, at each end of which nearest to the curved pieces is a pad; rising from the centre of this bar is another bar on which are fixed two pads.

[Printed, 6*d*. Drawings.]

A.D. 1853, June 7.—N° 1398.

NEWTON, Alfred Vincent.—(*A communication.*)—(*Provisional protection only.*)—" A novel construction of apparatus to " be used as a chest expander, and as a uterine or abdominal " supporter." This consists of "a bent strip of metal (by pre-

" ference plate steel) which passes from the back of the wearer " just below the shoulder blades, under the arm pits, and terminates in pads, which rest upon the patient's body near the " clavicle. Attached to or forming one piece with this elastic " frame is a central bar, which takes a downward direction in the " line of the patient's spine. This bar is jointed by means of a " pivot to a similar bar, forming part of an elastic frame, composed of a strip of steel, which passes round the body immediately above the hip, and terminates about opposite the centre " of the iliac region, either by two pads or in a plate which bears " against the body." "If thought desirable, straps may be " passed over the shoulders from the pads at the back of the " upper frame to the pads which form the terminals of that " frame, but this is not essential for keeping the apparatus in " place."

[Printed, 4*d*. No Drawings.]

A.D. 1853, June 10.—N° 1419.

MOORE, Josiah.—" Improvements in respirators." These are, constructing " respirators composed of several thicknesses of wire " gauze in a suitable case or frame, to be worn within the " mouth."

[Printed, 6*d*. Drawing.]

A.D. 1853, June 13.—N° 1428.

SMITH, William.—" Improvements in the mode of manufac- " turing metallic handles for knives and forks, backs for razors, " bows for scissors, and the relative parts of such like instru- " ments." A number of articles are named, and among them " are surgical instruments. These improvements consist in fitting " such articles in dies or moulds, and casting thereon the parts " comprehended in the title " of this invention. It is preferred to cast them of " German silver, white metal, or other material, " on to the tong, blade, or part of the article to which it is to be " attached."

[Printed, 4*d*. No Drawings.]

A.D. 1853, June 18.—N° 1487.

DE BUSSAC, Jacques François Dupont.—(*A communication.*) " An improved mode of making with iodine and its compounds,

" in combination with substances containing extractive principles, " various elementary combinations." Either heat together iodine " and a solution or watery decoction of the substances containing " extraction principles," as gums, barks, &c. &c., or iodine with water and "the substances containing extractive principles," until all the iodine disappears, ascertained by starch no longer being blued when brought into contact with the mixture. Instead of heat "it is sufficient to expose them to the action of the sun " or of the light, to obtain their perfect combination with the " iodine, and the transformation of the iodine into iodohydric " acid." Iodohydrates are formed by dissolving an iodide as an instance of quinine, "and mix that solution with the solution or " decoction of a substance containing extractive principles;" or " dissolve separately some sulphate of quinine, or quinine itself, " and mix it with a solution of gums, &c., add iodine dissolved, " or iodohydric acid, and heat the mixture by a bath. By these " means, or by slight modifications of the same, iodohydrates and " biniodo hydrates" are formed. "All the medicines in which " iodine is necessary, either in its simple state or combined with " other substances" are prepared as above.

[Printed, 6d. No Drawings.]

A.D. 1853, July 12.—N° 1655.

JOHNSON, John Henry.—(*A communication from Victor Courboulay.*) — (*Provisional protection only.*) — "Improvements " in the preparation of glycerine, and in its application." These are, glycerine is mixed "with fatty matters, alcohol, acetic acid, " water, &c.," it may "also be mixed in certain proportions " with hygienic and toilette vinegars, cosmetics," &c., to prevent " their drying or evaporating," and uniting them with the skin without "impeding the absorption or obstructing the pores. Glycerine readily combines with fatty matters "as cold cream, " pomades," &c., giving " them the property of holding in " suspension certain alcoholic dyes, aqueous extracts which have " hitherto always separated after admixture." " It may be also " appled to hair dyes and washes, hygienic baths, &c. The com- " mon glycerine is purified in order to preserve it in an aqueous " state by aromatic plants, balsams, salts, vinagers, and alcohol."

[Printed, 4d. No Drawings.]

A.D. 1853, July 16.—N° 1700.

RIVES, JACQUES.—"Improvements in trusses for the cure or "alleviation of hernia." These consist of "a mode of com-"bining and constructing parts of trusses for the use of two "pads." "To a belt (which passes round the body) is attached "a bent plate, to which is affixed and at right angles thereto "a spring, which at its lowest end, by a projection, enters a coni-"cal recess in the lower pad. The upper part of the spring is "bent so as to return down to the bent plate which is attached "to the belt, and it has a set screw and nut through it near the "upper part of the band, by which the pressure may be adjusted "and the bent end of the spring moves on the back of the upper "pad, it being guided between the two plates, by which the "upper pad is attached to the bent plate. If desired, there may "be two lower pads." Two of these trusses may be connected together by one cross piece. A truss is shown in which the "spring is slightly varied, being formed spiral at its upper end." Modifications of the above are shown.

[Printed, 8*d*. Drawing.]

A.D. 1853, July 28.—N° 1768.

HERRING, EDWARD.—"Improvements in the manufacture of "sulphate of quinine." These relate to the complete extraction of quinine from bark without the use of alcohol. The bark in powder is boiled in caustic alkali, pressed, washed, and afterwards boiled in sulphuric acid and water, and the residue boiled with dilute sulphuric acid a second and a third time or oftener. "These "after boilings may be reserved for each succeeding portion of "fresh bark" after it has been treated with alkali. The acid liquids evaporated at 120° F. are filtered from floculent matter, which is treated with dilute sulphuric acid until exhausted. The filtrate and washings are treated with excess of caustic alkali, and the alkaloid drained, pressed, &c., dissolved in dilute sulphuric acid and crystallized as usual.

Further crystallization may be employed, and the solutions may be decolorized by boiling with pure animal charcoal.

The caustic alkaline solutions in the first part of the process are acidified with hydrochloric acid and filtered, and excess of lime added; the precipitate containing "the alkaloids and free lime" is gathered, washed, dried, and powdered, and "treated by benzole

" or any solvent of the alkaloids that is not a solvent of lime." " If by benzole, turpentine, or lard," cold dilute sulphuric acid is added and agitation employed, " benzole, turpentine, or lard " floats," while the acid water containing the alkaloids sinks; this acid water is treated with caustic alkali, and " the crude " alkaloids are obtained without the application of heat."

[Printed, 4*d*. No Drawings.]

A.D. 1853, August 4.—N° 1826.

FLÉCHELLE, Barthelemy Louis Francois Xavier.—" Certain improvements in the means of carrying, bedding, and " bathing the injured, ill, or invalid persons." These are, first, a litter, which consists " of an iron frame, capable of folding in the " centre of its length, and also jointed so as to be capable of being " folded or separated into two parts in the direction of its breadth." At each corner are handles, by which it is carried, and " which, " when the litter is placed on the ground, turn down and form " legs." " On this frame is a mattrass, also capable of being " divided into two parts longitudinally."

Second, a bed for medical or surgical operations, and " which is " so arranged as to allow a part to slide out from the centre so as " to permit the operator to advance towards the centre of the bed " when necessary. The bed is also arranged so as to be capable " of being set at any required inclination."

Third, " consists in the arrangement of a bath for sick persons. " The patient is slid from the litter, or in any other manner, " placed on a strained web, which, by means of a pair of winches, " one at each end, is lowered into the bath underneath."

[Printed, 10*d*. Drawings.]

A.D. 1853, October 4.—N° 2263.

JORDAN, Henry Jacob.—(*A communication.*)—" An improved " medicine for the cure of venereal affections, which I denominate " 'the treismar.'" This consists of the following ingredients :— " powdered henbane leaves," " compound tragacanth powder," " nitrate of potash," " tartrate of potash," and " bicarbonate of " soda," mixed in certain proportions, and " a sufficient quantity " of sugar to make a lozenge."

Instead of a lozenge, " they may be dissolved in boiling water, " and taken as a draught when cold."

[Printed, 4*d*. No Drawings.]

A.D. 1853, October 8.—N° 2308.

SMARTT, GEORGE LIFFORD.—" Improvements in vessels for " preserving leeches and fish alive." These are in " having an " air pipe in the bottom of the vessel for introducing fresh air " and allowing the waste water to escape, and the distributor or " spreader on the lid or cover of the vessel for distributing the " water over the perforated lid." In the bottom of a vessel an air tube rises " an inch and a half, more or less, from the " bottom; the top of the air pipe is furnished with a cover or " rose " perforated with holes; on the bottom of the vessel are small stones and charcoal; on the top of the perforated lid is a convex-shape head, on which water is made to flow from a tap. " When the body of the water inside the vessel rises to the level " of the top of the air pipe, it flows off through the perforations " in its cover."

[Printed, 6*d*. Drawing.]

A.D. 1853, October 14.—N° 2364.

JONES, WILLIAM.—(*Provisional protection only.*)—" A certain " chemical compound or compounds applicable as a remedy for " cuts, scalds, burns, wounds, and accidents of a similar nature, " to which the same can or may be applied." This consists as follows :—" Bol. armenia, blue vitriol, rock alum, and white powder " are ground into fine powder, and mixed with acetic acid or " common vinegar, in quantity depending whether a paste or a " liquid may be required." These are mixed in certain proportions. " Spread the paste upon, or immerse in the compound or " liquid (as the case may require), lint, linen rag," &c., and apply it to the parts.

[Printed, 4*d*. No Drawings.]

A.D. 1853, October 15.—N° 2386.

LAURIE, GEORGE.—(*A communication from John Allen.*)—" Im- " provements in the manufacture of artificial teeth and gums." These are, first, " using asbestos in combination with sand and " plaster of Paris, in place of plaster of Paris and sand alone, " when covering the teeth, after they have been set in wax on a " metal plate."

Second, " obtaining or forming the gums or parts of gums in " combination with the use of a metal plate with the teeth affixed "thereto;" such gums "being composed of vitreous compounds," consisting of silex, borax, felspar, Kaolin clay, asbestos, caustic potash, all in certain proportions, fused together, afterwards powdered and mixed with certain proportions of pulverized Wedge-"wood, Parian marble, or porcelain tooth body," and "fine "French clock shade or other glass," all in "an impalpable "powder." This is brought to a paste by water, and inserted "between and round the basis of the teeth, so as to form a "continuous gum;" shreds of platinum are mixed with it, and are also soldered on to the plate; after which "it is fused in the "muffle of a furnace." "The gum, or flesh-colored enamel, is "applied and fused in the same way."

[Printed, 4*d*. No Drawings.]

A.D. 1853, November 7.—N° 2581.

FALCONI, MARINO LOUIS JOSEPH CHRISTOPHE VINCENT.—"A certain composition for the preservation of the dead." This consists, of sawdust, in "preference, of common deal previously "well dried and sifted fine, or of other pulverizable vegetable "matters the least susceptible of decomposition," say from 20 to 30 lbs., and about 8 to 10 lbs. of a pulverized metallic salt, such as sulphate of zinc or iron, and from 1 to 1½ oz. pulverized camphor. "Extract of benzoin, of lavender, balsam of tolu, or "other perfume may be added to the other ingredients." "For "bodies dead from epidemic or contagious diseases it is optional "to add pulverized quicklime to the above ingredients to "accelerate their destruction." The powder should be applied over all parts of the corpse, except the face and hands, when laid in the coffin.

[Printed, 4*d*. No Drawings.]

A.D. 1853, November 15.—N° 2646.

THWAITES, JOHN HALL BROCK, and HERAPATH, WILLIAM BIRD.—"Improvements in the manufacture of quinine and other "alkaloids." These are "the use of fusil oil, camphine, turpen-"tine, or other hydrocarbon insoluble in water" "for separating "alkaloids from the liquid in which they are held in suspension "or solution." The bark powdered is boiled with dilute car-"bonated alkali, pressed and washed with water, and again pressed till dry. "The bark is then digested at a gentle heat, say 160°, " for one hour or more," in dilute hydrochloric acid, and the acid liquid strained off, and the bark treated several times in like manner. "These weaker acid solutions" are "to be used for " exhausting fresh portions of bark." The strong acid solutions are heated with cream of lime in excess, the whole allowed to cool and agitated with fusil oil in preference to turpentine, camphine, &c., when the lighter fluid is drawn off and thoroughly agitated with dilute sulphuric acid yields up the alkaloids to the acid solution, the fluids separate, and the acid one below is drawn off and decolorized by charcoal and by crystallization, &c. The alkaline liquid obtained early in the process is mixed with the liquid containing chloride of calcium, from which the alkaloids have been removed by the solvent, chloride of calcium added to precipitate the carbonic acid as carbonate of lime. The liquid filtered from it, and concentrated and slacked lime or cream of lime added, and agitated with fusil oil, &c., and proceeded with as before.

[Printed, 4*d.* No Drawings.]

A.D. 1853, November 18.—N° 2686.

RICE, James, and MATTHEWS, William. — (*Provisional protection only.*)—" Improvements in instruments for taking and " applying vaccine matter." This " consists in combining parts " as follows :—" A cylinder or barrel is used, having within it a " piston moveable by a piston rod in the manner of a syringe. " To the piston is applied a grooved point, which is capable of " being passed out from and drawn back through the end of the " cylinder or barrel. The outer end of the barrel is made some- " what concave, and there is a small hole in the centre for the " passage of the puncturing point. On the interior of the end is " a small chamber through which the pivot passes. The piston " rod is moved outwards by pressure, and is by preference " brought back by a spring. The quantity of motion given to " the piston may be adjusted by a screw nut, or otherwise."

[Printed, 4*d.* No Drawings.]

A.D. 1853, November 24.—N° 2735.

NEWTON, Alfred Vincent. — (*A communication.*) — (*Provisional protection only.*)—" A novel construction of apparatus

" to be used as a chest expander, and as a uterine or abdominal " supporter." For this purpose providing " a bent strip of " metal (by preference plate steel), which passes from the back " of the wearer, just below the shoulder blades, under the arm- " pits, and terminates in pads which rest upon the patient's " body near the clavicle. Attached to or forming one piece " with this elastic frame is a central bar, which takes a downward " direction in the line of the patient's spine. This bar is jointed " by means of a pivot to a similar bar, forming part of an elastic " frame composed of a strip of steel, which passes round the " body immediately above the hip and terminates about opposite " the centre of the iliac region, either by two pads or in a plate " which bears against the body. These frames are made so that " they shall pass round the body and only press upon it when " pads are provided to intercept the pressure. These pads are " placed at the terminations of the frames as already noted, and " also at opposite sides of the spinal column. The central bar, " composed of two parts as already stated, while permitting of " no longitudinal extension, while the apparatus is in use, will " allow of a slight forward and backward play, and by its joint " will offer no resistance to the lateral motion of the body." If desired, straps pass "over the shoulders from the pads at the " back of the upper frame to the pads which form the terminals " of that frame, but this is not essential for keeping the apparatus " in place."

[Printed, 4*d*. No Drawings.]

A.D. 1853, November 26.—N° 2756.

MOAT, WILLIAM CROFTON.—(*Provisional protection only.*)— " An improved truss." This consists of " a bar or strip of steel " bent into the shape of an ellipse to suit the formation of the " body, and affixing "thereon a slide or runner, which carries a " plain piece of tempered steel, set at an angle to the circular " bar, so as to press inwards when on the body." "The bar " is covered by a pad, which together with the plain piece " of tempered steel, is capable of being moved upon the bar " when required to alter the position of the plain piece. The " perssure pad is carried at the end of this plain piece of steel, " and by altering the size of this pad, any convenient degree " of pressure can be exerted and maintained. Upon the exact

" position of the spring and pad being determined, the spring " may be fixed in that position by a screw passed through the " slide."

[Printed, 4*d*. No Drawings.]

A.D. 1853, December 5.—N° 2819.

HOCKADAY, Charles William.—" Certain chemical com- " pound or compounds, applicable as a remedy or remedies for " scorbutic and other affections of the human body." Several compounds are described, first, for scurvy, oxymuriate of mercury, muriatic acid, " viri antimonii," distilled water, and sufficient of saccharine matter. These are mixed together in certain proportions, and so many drops given according to the age of the patient.

Second, for a tooth-ach (odontalgic) tincture, nitrous acid, and tincture of pyrethrum, in certain proportions.

Third, " for the venereal complaint, gonorrhœ," powdered nitrate of potash, cubeba, and gum tragacanth, in certain proportions and divided into powders.

Fourth, for ringworm, axungia (lard), precipitated sulphur, kreosote, and rose pink in certain proportions; " the above is also " good in what is known as grocer's itch."

Fifth, for worms, powdered scammony, submuriate of mercury and white sugar are mixed together in certain proportions, and the doses to be taken according to age are given.

Sixth, for a corn plaster mix superacetate of lead, mercurial plaster, lead plaster, resin plaster, and powdered opium in certain proportions.

Seventh, for tooth paste, mix precipitated chalk, powdered orris root, powdered corral, burnt alum, cochineal, oil of cloves, essence of bergammot and honey of roses in certain proportions.

[Printed, 4*d*. No Drawings.]

A.D. 1853, December 16.—N° 2920.

WHITEHEAD, Walter George.—(*Provisional protection only.*)—" An improvement or improvements in hats, caps, bon- " nets, and other coverings for the head." This consists in introducing into hats, &c. " such combinations of metals " " as " shall form with the moist skin " " a voltaic or galvanic combi-

" nation, the electrical current "curing or relieving headache." Sometimes wires of copper and zinc, and sometimes plates of these metals are employed.

[Printed, 4*d*. No Drawings.]

1854.

A.D. 1854, January 12.—N° 85.

JOHNSON, John Henry. — (*A communication from Victor Courboulay.*)—" Improvements in the preparation of glycerine, " and in its applications." These are said to be the application and use of glycerine in the art of perfumery as well as in the science of medicine." "Balsams or resins" "are always preci- " pitated when in contact with water; whereas glycerine, which " is soluble in water, alcohol, or acetic acid, combines readily at " the same time with fatty matters, and will give to the treated " preparations the property of uniting more intimately with the " skin of the human body," &c. &c.

[Printed, 4*d*. No Drawings.]

A.D. 1854, January 24.—N° 180.

MASSEY, William. — " Improvements in artificial teeth and " gums." These are, first, " combining or incorporating with " mineral substance to form artificial gums of coloring or staining " matters." This means coloring the gums throughout instead of the surface alone. Any coloring matter may be employed, but what " has been found to answer will consist of gold leaf or gold " filings combined with felspar " in certain proportions.

Second, " the forming of artificial gums of mineral substance " separately from the teeth, and the fixing thereto of suitable " teeth." The gums are formed " with recesses or undulations " suitable to receive the base of the teeth," and the teeth are held " in position on the gums by wires passed through holes " formed for the purpose through the artificial teeth and gums, " and also through the metal mouth plate, where one is used, " and then rivetted."

[Printed, 4*d*. No Drawings.]

A.D. 1854, February 24.—N° 444.

HARDY, Samuel Little.—"An improved apparatus for ap-" plying chloroform vapour or other similar vapour in certain " cases." This consists of " the combination of a pair of bellows " with chambers through which in succession air may be made " to pass and become impregnated with vapours contained " therein, and be ultimately discharged therefrom and directed " to particular parts of the human body." The chambers contain " sponge or other substance charged with chloroform."

[Printed, 10*d*. Drawing.]

A.D. 1854, February 28.—N° 491.

HOLBECHE, John Soden.—" Improvements in the construc-" tion of invalid bedsteads, which said improvements are also " applicable for couches, chairs, and reclining seats or beds for " invalid carriages." These are first, " the use of caoutchouc or " other springs acting longitudinally," such " springs being so " adapted to the weight of the body as to form a counterpoise " thereto, the frame of the bed or couch being so jointed as to " conform itself to the position the patient may wish to assume. " This is effected by removing a catch, which prevents the spring " from acting, and which requires only a slight amount of " muscular exertion, the patient allowing the bed to raise him " or her to the position requiréd, and when in that position allow-" ing the catch to resume its former position, the bed will be " fixed." The reverse of this may also be effected, " the bed may " be lowered by removing the catch, and the patient allowing his " or her weight to overcome the force of the springs. Or again, " if desirable, the patient may by the slightest exertion oscillate " or rock himself or herself by holding the cord communicating " with the catch or detent."

Second, " constructing the bottom or foot part of bedsteads, " that the footboard may be converted into a table or reading " desk."

Third, " arranging the bottom part of the bed frame, that it " may be inclined at any angle that may be required for the " support of the legs; this united with the first part of my in-" vention above referred to, converts the bed into a chair."

Fourth, " removing a portion of the foot posts, or so construct-

" ing them, that they may be shortened or relengthened, so that " the invalid may be in a position suitably inclined to the horizontal, such arrangements being in connection with the springs " before mentioned."

[Printed, 1s. 4d. Drawings.]

A.D. 1854, March 1.—N° 493.

GILBERT, Henry.—(*Provisional protection only.*)—" Improvements in connecting and supporting artificial teeth." These are, covering the springs " employed for connecting the upper and " lower sets of teeth with prepared gutta percha or prepared " india-rubber separately or combined " also " in some cases, " apply a thin coating of gold by the electrotype process to the " exterior of the " covering; also steel springs " covered by a " thin coating of gold applied by the electrotype process;" also springs of a " solid or tubular form of prepared india-rubber or " gutta percha."

[Printed, 4d. No Drawings.]

A.D. 1854, March 8.—N° 550.

BEARDSLEY, George.—" Improvements in round or circular " machinery for the manufacture of textile and looped fabrics." These fabrics are to be used for many purposes, and among others for " chest protectors, &c., &c." The improvements consist in adding " to round or circular frames for the manufacture of " textile and looped fabrics a looped presser wheel for the purpose of throwing in a loose loop into the fabric over every other " needle or otherwise, if required; also in the addition of two " extra wheels connected with the main wheel for making the " fabric, so as to throw a loose or fast loop on either side of the " fabric;" also in " making the fabric or fabrics by having every " other needle a blank or a point so as to produce an additional " loop, thereby creating an increase of fleece."

[Printed, 10d. Drawing.

A.D. 1854, March 10.—N° 574.

MOSELY, Simeon. — " Improvements in the manufacture of " artificial palates for the adaptation of artificial teeth." These consist " in forming such said palates with a series of small " indentations of different depths." " The indentations which " are at the middle of the palate are formed considerably deeper

" than the surrounding ones." "The object and intention of " thus forming the palates is to increase the surface of the air " cells produced by such indentations, and at the same time to " distribute the pressure over the entire surface of the roof of the " mouth instead of effecting the adhesion of the artificial palate " by causing pressure upon any one part of the mouth in " particular, as heretofore generally practised in constructing " artificial palates."

[Printed, 4*d*. No Drawings.]

A.D. 1854, March 17.—N° 641.

BARTH, George Harman.—" Improvements in the mode of " supplying and administering gases for the alleviation and cure " of certain diseases." These are, first, "the general arrangement " and construction of apparatus to be used." This consists of a tank with a hollow core or cylinder in which is placed a wrought iron bottle, into the side of which at the bottom a pipe is screwed which has "a stopcock, from which a pipe proceeds " to the top of the core of the tank, and there delivers its gas " into the gasholder just above the water line." A union joint connects the bottle with the tube proceeding to the top of the core. The gas holder has on the top a cock for the admission of air and an inhaling cock, &c.

Second, "the supplying of gas to be used for curative purposes " in a portable form by compression in a strong vessel."

Third, "the attaching the vessel containing the condensed gas " to any apparatus in which it can be measured and diluted, and " from which it can be inhaled for medical purposes."

Fourth, "the system or mode of including the vessel containing " the condensed gas in the core or cylinder of the tank of the " gasometer."

Fifth, "the application and use for medical inhalation of a bag " of flexible material, instead of the gasometer" "in connexion " with a strong vessel to hold the condensed gas."

[Printed, 8*d*. Drawing.]

A.D. 1854, March 30.—N° 736.

WILLIS, Edward Cooper. — (*Provisional protection only.*) — " An improved mode of manufacturing gutta percha into sheets." These sheets are "suitable for medical purposes." In order to render sheets of gutta percha capable of resisting a strain in the opposite direction of the grain or fibre, they are steeped "in "a bath of heated coal tar naphtha, and rolled in the direction "of their length and breadth." and the naphtha driven off "by "exposure to air, or otherwise."

[Printed, 4*d*. No Drawings.]

A.D. 1854, April 11.—N° 847.

NOEDL, CHARLES ANTHONY.—"A portable vapour bath." This consists in "combining together of certain parts." A metal mug or vessel, having a tap towards the bottom, and in the upper part of which is a perforated plate, on which "any aromatic or "other substance" may be placed. It has a dome-shaped cover, with a stop-cock at top, and a spirit lamp in a frame underneath. The bath is placed under a chair. If applied to a person in bed, "a perforated zinc box is employed."

[Printed, 6*d*. Drawing.]

A.D. 1854, April 13.—N° 866.

COX, ARTHUR HAWKER.—"Improvements in coating pills and "bolusses." These are, coating them with "a gum or resin "varnish insoluble in water," such as "Venice turpentine, "Canada balsam, gum thus, or frankincense, mastic, myrrh," &c. The resins are dissolved in "ether, alcohol, or other proper "solvent," and the pills coated and dried are coated a second time, or the gums are reduced to powder, and the pills "coated "with the powder are immersed in a solvent;" or the pills are first immersed in a solvent, rolled in the powdered resin, and "the solvent evaporated."

[Printed, 4*d*. No Drawings.]

A.D. 1854, May 26.—N° 1175.

LOOMIS, MAHLON.—"An improvement in the manufacture of "artificial teeth." This consists "in making whole sets, or the "upper or lower halves or parts of sets of artificial teeth, all of "porcelain." "A half set consists of but one piece of material, "there being no metallic plate, as in the usual way; but the "same material, of which the teeth themselves are made, is used "instead of a metallic plate."

[Printed, 6*d*. Drawing.]

A.D. 1854, May 30.—N° 1193.

TOMLINSON, Richard.—" The application of a new material " or fabric, to the manufacture of plasters for medical or surgical " purposes." This consists in " the substitution for leather and " plain woven cloth of a woven fabric, coated on one side with " waterproofing composition, so as to form a back for the plasters " spread on the other side, in such a manner as to leave a margin " round each plaster."

[Printed, *4d.* No Drawings.]

A.D. 1854, May 30.—N° 1199.

WERTHEIMBER, Leopold.—" Improvements in apparatus " for preventing sea sickness." This consists " in counteracting " the action of the vessel upon the human body by interposing " another medium or base between the ship and the body, which " medium or base does not follow the motions of the vessel, but " communicates to the body an opposite or another motion, which " destroys the impression of the vessel's motion on the body." The apparatus consists, first, of a platform fitted in any convenient part of a steamship, and attached to the piston rod of an ordinary cylinder; steam is admitted to the cylinder by a four-way cock, which can be opened and shut by various means.

Second. " Certain means or apparatus by which a person, when " standing upon a platform, may cause it to rise or fall at will."

Third. " Certain elastic articles, so that a rising and falling " motion may be given to the body at the will of the wearer."

[Printed, *4d.* No Drawings.]

A.D. 1854, June 5.—N° 1252.

ALISON, Somerville Scott.—" The manufacture of a new " material to be used for external applications in medicine." These are a perforated and impermeable material. First, the lambskin is preferred. It is cleaned by soap and water, " dried, " and made soft by rubbing with pumice stone." " The chamois " is perforated with holes of various sizes."

Second, " rendering the chamois skin impermeable on one surface," after dressing as before " a solution of caoutchouc of any " colour, or other water repellant, is applied in such a manner as " to coat the outer or harder surface of the skin without penetrating to the inner and finer one."

[Printed, *4d.* No Drawings.]

A.D. 1854, June 10.—N° 1287.

PULS, FRANCIS.—(*Provisional protection only.*)—" Improve-" ments in electro-galvanic apparatus for medical purposes, parts " of which improvements are also applicable to other electro-" galvanic apparatus." These are " plates of any metal at present " in use for the purpose, so arranged that each plate, whether of " negative or positive metal, shall be rigidly connected with the " next plate but two before it or after it in the baterry, or with " the next plate but one of the opposite quality to itself by an " extension of either of the plates along the side of the battery " to meet the other plate." An induced current apparatus is formed by causing a piece of hard steel to be soldered over one end of the electric wire, which is wound over a bunch of soft iron wire, or a thin rolled iron plate, and at the end of the said hard steel place a small plate of platina, flat or rounded, and place in connection with the said plate a platina or platinized spring, and which connect with one pole of the galvanic battery. " The " apparatus is comprised in an oblong box, divided into two " compartments, one of which contains the battery," the other " the apparatus for the induced current."

[Printed, 4*d*. No Drawings.]

A.D. 1854, July 19.—N° 1584.

BROWNE, JOHN COLLIS.—" Improvements in the manufacture " of camp bedsteads." These consist " in constructing them so " collapsible as to render them exceedingly portable," &c. " The " side rails are divided in their length in one, two, or more places," and jointed by hinges; they are kept apart by means of wood stretchers. " The side rails are further connected by a number of " pieces of webbing or pieces of canvas," &c. And it is stated that the folding properties of the bedstead, in addition to the purposes of collapsing, are extremely well adapted for camp purposes, in placing a patient in the varied positions that may be desirable, according to the nature of a wound or ailment.

[Printed, 1*s*. Drawings.]

A.D. 1854, July 24.—N° 1623.

CASTETS, AUGUSTE.—The extraction of " a substance for sup-" plying the place of quinine." This is effected " from the seeds " of the plant called cumin " as follows :—The seeds are boiled in

water, the solution concentrated, and litharge added until the liquid is no longer acid. "The oxide of lead is partially precipi-
" tated by sulphuric acid," "the filtered liquid evaporated to
" dryness, and the residue treated with alcohol, which dissolves
" more than half of the cumin." "The alcoholic solution
" evaporated to dryness, the precipitate is redissolved in distilled
" water," and acid added, and then ammonia in excess precipitates "the pure cumin or artificial quinine." The sulphate is formed by treating it with sulphuric acid. The other half not dissolved by the alcohol is obtained by means of sulphuric acid, &c.

[Printed, 4*d.* No Drawings.]

A.D. 1854, August 5.—N° 1715.

BOISSONNEAU, Auguste.—" Improvements in artificial eyes." These are, first, "proportioning the length of artificial eyes in
" such manner that their caruncular and temporal portions shall
" not exert pressure upon the corresponding organic parts of
" their orbit."

Second, "making the necessary shortening of the eye for this
" purpose only in the temporal section."

Third, "the formation of a notch, perforation, or aperture in
" the inferior palpebral section of artificial eyes for the purpose
" of establishing a communication between the interior and exterior thereof, and thus allowing the lachrymal fluid to maintain
" its proper level in the hollow of the eye, and restoring the functions of the lachrymal canal."

[Printed, 6*d.* Drawing.]

A.D. 1854, August 11.—N° 1758.

BLUNDELL, Walter.—" An improved apparatus for treating
" or preparing any part of the human body requiring to be surgically operated upon, for the purpose of totally or partially
" benumbing the sense of feeling at the desired part of the
" human body." This consists of a metal vessel with an inner case and false bottom; the space between the outer and inner case is filled with a non-conductor, such as charcoal or wool. At the centre of the false bottom is a hole in which is inserted a tube perforated in such a manner " that when the salt and ice or other
" freezing mixture is placed within the inner vessel, the liquid

" portion only shall pass into the inner space which is below the " false bottom," from whence it passes by a cock through an elastic tubing to the apparatus, which is a flexible bag or a hollow piece of metal, to be placed against the part to be operated upon; from this bag or vessel is another elastic tube so as to allow of a continuous flow of the cooled liquid through the apparatus.

[Printed, 6*d*. Drawing.]

A.D. 1854, August 12.—N° 1763.

ROGUIER, PIERRE ATHANASE.—(*A communication.*)—(*Provisional protection only.*)—" A new mode of treating and curing " varicose veins of the human body." This consists of a solution made by steeping "white clematis plant" in "liquid perchloride " of iron," and also in a new ointment composed of "hogs' lard, " perchloride of iron in a solid state, sal ammoniac, and deutoxide " of iron." The mode of operating with these is described.

[Printed, 4*d*. No Drawings.]

A.D. 1854, September 5.—N° 1940.

STOCKER, SAMUEL.—" Certain coverings for various parts of " the human body, with a view to the preservation of health." These are, first, " the constructing lungs' protectors of a curved " plate of suitable material, and having a piece of sponge, wool, " or other suitable flexible material, through which the air passes " to and from the lungs."

Second, " the construction of lungs' protectors of a curved " plate of any suitable material, having an aperture or apertures " communicating with a chamber situated within and opening " into the mouth."

Third, " the constructing lungs' protectors of a screen of hair, " horse hair fabric, or other suitable material, attached to a frame " held inside the lips."

Fourth, " the constructing lungs' protectors of a curved plate " of metal or other suitable material covering a portion of the " teeth, and having a tube or recess in which is contained a coil of " wire gauze, sponge, or other suitable material for the air to pass " through in its passage to and from the lungs."

Fifth, " the forming an aperture or apertures in the lower part " of a hat or cap, for the purpose of seeing through when the hat " or cap is drawn over the eyes."

Sixth, "the constructing a hat body in two lengths, the part to "which the brim is attached being capable of being slided down "from the other part, and having an aperture or apertures to see "through."

Seventh, "the construction of a hat with a screen moveable "within it, which can be drawn over the face, and has apertures "for seeing and breathing through."

Eighth, "the attaching to the lower part of a cap or helmet a "veil or curtain protecting the head, and furnished with apertures "to see through, and which can be rolled or turned up and un-"rolled at pleasure; also, attaching to a cap or helmet a flexible "air-tight covering, which, when inflated, may serve as a pillow "in travelling."

Ninth, "the construction of a mask with a descending breathing "channel."

Tenth, "the construction of a hood or covering to be worn "over a hat or bonnet, and descending to the shoulders, and "having an aperture to see through."

Eleventh, "the attaching to the circumference of an umbrella "or parasol a circular veil or curtain, having an aperture in front "to see through, or lengthening the umbrella, and forming an "aperture for sight."

Twelfth, "the perforation of india-rubber or other waterproof "shoes, and filling up the perforations with threads or strips of "woollen or other suitable materials."

Thirteenth, "the forming the external and upper part of clogs "or goloshes of paper made impervious to wet."

[Printed, 8*d*. Drawing.]

A.D. 1854, September 25.—N° 2062.

BIGG, HENRY HEATHER. — (*Provisional protection only.*) — "Improved apparatus for curing deformities of the human "frame." These consist of "a shoe or frame which is jointed "to another frame that receives the leg." "To one side "of the shoe that receives the foot are affixed a number of studs "or pins, and on one side of the vertical frame which envelopes "and secures the leg are a corresponding number of holes or "studs." These studs, &c. are connected together by elastic bands.

[Printed, 4*d*. No Drawings.]

A.D. 1854, October 23.—N° 2259.

SCOTT, James.—" Improvements in apparatus for facilitating " surgical operations and teaching anatomy." These consist of an arrangement of a table with other apparatus. The table consists of a board with a plate " screwed upon each border of its " upper surface," rising above the plain of the table. Above this is another board divided into three parts, but jointed by hinges, " so that any one of its portions " may be raised " by a screw " directed upwards through the lower board of the table, or by " wedges." The two boards may be fixed together by a thumbscrew and washer. A horizontal screw moves the upper board along the lower slab or board. Two pillars rise from the lower board, to the tops of which a cross beam is fastened; on this board is fixed a stage for placing " a mirror or mirrors," &c. This may be used for surgical operations, &c.

[Printed, 10d. Drawing.]

A.D. 1854, November 7.—N° 2357.

METCALFE, Thomas.—" Improvements in the construction " of portable carriages, chairs, and other articles for sitting or " reclining upon." These are applicable, among other things, to " invalid chairs," and " vehicles for carrying sick or wounded " soldiers or sailors," and consist, first, " of a cross framing, " jointed together by means of centre pins, studs, or pivots, such " framing, when extended, being held in one given position " by means " of a flexible or other band or strap extending from one " rod or lever of the cross framing to the other."

Second, " the application of the cross framing to carriages with " rigid bodies." The " running wheels are mounted upon axles " at the lower ends of the bars or levers, and these axles are " formed for bending round the ends of the bars to right angles " and mounting the levers thereon."

Third, applying side handles to carriages, " so that the person " propelling the carriage may be enabled to walk by the side and " converse with the rider."

Any modification of the above is claimed.

[Printed, 1s. Drawings.]

A.D. 1854, November 10.—N° 2390.

LÉPINE, Eugene Antoine.—" Certain powders and colly-" rium for curing the diseases of the eyes without the use of " surgical operations, to which invention he has given the name " of Lepine's Ophthalmological Powders and Collyrium." Three powders and a solution are described. These are applied with a " camel's hair brush " in a particular manner, according to the ailment. The quantities of each substance to be used are given, but they " may be augmented or reduced " as the case may vary. No. 1 powder consists of " sugar candy, dry, extract of " opium, extract of bella-donna, and proto-ioduret of mercury." No. 2 powder is composed of the same ingredients, only " ioduret " of lead " substituted for the " proto-ioduret of mercury." No. 3 powder is composed of the same ingredients, only strychnine is substituted for the salt of mercury or lead. The solution named " collyrium " is composed of acetate of lead and " hydriodate of " potassium " dissolved in distilled water.

These external applications are assisted " by practising for " a few minutes electricity on the temples, by means of the " electro-medical apparatus of Breton Brothers, of Paris.

[Printed, 6*d*. No Drawings.]

A.D. 1854, November 18.—N° 2448.

CALARD, Théodule François.—(*Provisional protection only.*) —" Certain improvements in bedsteads. These are said to be chiefly applicable to beds of infimaries, &c., and consist in surrounding the space between the bed and top or crown with " per-" forated metallic sheets, wire gauze, or similar material " like a cage; " when the treatment of the disease requires a continual " application of water or other liquid," " fix a reservoir on the " cage top;" and at the bottom of this reservoir " fix a flexible " tube, by means of which the water or other liquid may be " directed to any part of the bed under it."

[Printed, 4*d*. No Drawings.]

A.D. 1854, November 25.—N° 2494.

BLUNDELL, Walter.—" An improved apparatus for treating " or preparing any part of the human body requiring to be " surgically acted upon, for the purpose of totally or partially

" benumbing the sense of feeling at the desired part of the " human body." This is said to be an improvement upon apparatus described in N° 1758, A.D. 1854, and consists in applying to the apparatus there described what is termed "a graduator," which is interposed between the refrigerator and the "flexible " bag or apparatus to be applied to the part to be operated " upon." The "graduator" is a vessel containing warm water or other suitable warm fluid; it has a lid through which a pipe, which has a cock, is attached to the flexible tube from the refrigerator, which pipe passes to the bottom of "the graduator" in a coiled form. The "flexible bag or apparatus to be applied " to the part to be benumbed," is attached by a flexible tube to a second cock leading out of the lid. There is also a cock between the tube communicating with the refrigerator and the tube communicating with the flexible or other apparatus, so as to connect these two tubes "when the cooled fluid is not required " to pass through the refrigerator."

The object being to do away with the "unpleasant sensation " to the patient arising from the comparatively sudden application " of cold to the part."

[Printed, 6*d*. Drawing.]

A.D. 1854, December 2.—N° 2535.

HESS, Richard.—(*Provisional protection only.*)—" An improved " voltaic battery for medical and philosophical purposes." This " is composed of a number of compound plates," each composed of "two plates of different metals" soldered together, one "being " negative and the other positive, as copper and zinc, or silver " and zinc." Between each pair of these plates "is interposed " a plate of fibrous or absorbent substance." The whole is kept together by a rod of some non-absorbing or conducting "substance passing through the mass." It is preferred to draw a tube of india-rubber through a hole in each metallic and absorbent plate, and force a metallic wire through the tube in order to effect a complete insulation.

[Printed, 4*d*. No Drawings.]

A.D. 1854, December 7.—N° 2577.

METCALFE, Thomas.— (*Provisional protection only.*)—" An " improved construction of bath chair." The chair is an invalid one, " suitable for out of door use," and admits " of being folded " up. It consists " mainly of two skeleton frames jointed " together, after the manner of the ordinary folding chair, and " similarly provided with jointed arms." These frames are mounted " on wheels, which may be removed at pleasure, to allow " of castors being applied to the axles of the wheels." Frames are jointed to the back and front, to which to secure a canopy; also for carrying a footboard.

[Printed, 4*d*. No Drawings.]

A.D. 1854, December 11.—N° 2608.

PULS, Francis.—" Improvements in electro-galvanic apparatus " for medical purposes, part of which improvements are also " applicable to other electro-galvanic apparatus." These consist in " the arrangement and construction of plates for a single fluid, " or dry battery with but one cell, without division between the " different pairs of plates." A box, preferred to be of gutta percha, has projections therein, so as to hold the plates in a vertical position, and partitions or stays of the same or a similar material. The plates of the battery have " lateral prolongations," " by which they are rigidly connected in pairs."

[Printed, 6*d*. Drawing.]

A.D. 1854, December 29.—N° 2750.

LOYSEL, Edward.—(*Provisional protection only.*)—" An improved lavement or injecting machine." This consists of " a vase, by preference, graduated " and having an opening at " the lower part, to which is connected a flexible tube of any " convenient length," and provided with a jet or nozzle, and also with a stopcock. In operating the vase is filled with the liquid, and elevated above the patient, " so as to cause the liquid to flow with facility." Mixed liquids are agitated by adapting to the lid of the machine " a small stirring apparatus," actuated " by a spring."

[Printed, 4*d*. No Drawings.]

1855.

A.D. 1855, January 8.—N° 43.

HUGGINS, JOHN.—" A new or improved machine for the " manufacture of lint." These are first, " feeding lint-making " machines," by " passing the fabric to be converted into lint " over a roller covered with pins."

Second, " guiding the fabric to be converted into lint in lint-" making machines " by " attaching the said fabric to a tranverse " bar sliding with friction on a table between the roller from " which the fabric is uncoiled, and the feeding apparatus."

Third, " the method of constructing the knife bed or surface " against which the knife acts in lint-making machines " by " the " use of two plates of metal secured very nearly but not close " together, the edge of the knife entering between the said plates, " whether leather, wood, or other soft matter be introduced " between the said plates or otherwise."

Fourth, the general arrangement of such machines.

[Printed, 8*d*. Drawing.]

A.D. 1855, January 10.—N° 65.

FULLER, WILLIAM COLES.—" Improvements in the construc-" tion and adaptation of india-rubber springs." These are said to consist "of various new and useful adaptations," besides methods of constructing india-rubber springs. Relating to this subject is " the adaptations of india-rubber springs to artificial " legs and crutches." This is accomplished in two ways: first, " by inserting one or more rings of small diameter into the " stem of the leg or crutch, and secondly, by the use of a spring, " consisting of rings or cords of vulcanized india-rubber, in-" serted horizontally at considerable tension, so as to give great " sustaining power in small compass."

[Printed, 1*s*. Drawings.]

A.D. 1855, January 16.—N° 116.

OUDIN, JEAN ANTOINE FRANÇOIS VICTOR.—" A new liquid " for preventing sea-sickness." This is made by distilling hydrochloric acid and alcohol, and mixing the product with water, and sweetening the same; but it is preferred, in the final specification only, to distil chloride of lime, water, and alcohol, and to mix the product with water, and sweeten it. "A few drops of essence "of mint or bitter almonds" are added, and it is colored by cochineal. One or two table-spoonfuls are taken before going on board ship; and, "if taken during the retching, it will greatly "reduce its violence and the pain." The proportions of the ingredients used are given, but the proportions may be varied.

[Printed, 4*d*. No Drawings.]

A.D. 1855, February 7.—N° 287.

JOHNSON, JOHN GROVE.—(*Letters Patent void for want of final specification.*)—"Improvements in surgical bandages." These "consist in applying straps or other forms of fabric prepared "with adhesive materials," such "straps or fabrics having fixed "thereto sheet metal or other forms of light hooks or fastenings, "to admit of flexible elastic straps of india-rubber, or other "suitably elastic materials being attached thereto."

[Printed, 4*d*. No Drawings.]

A.D. 1855, February 24.—N° 411.

WHITE, JOHN HAINES.—"An improvement in the method of "applying artificial teeth." This consists in giving a roughened surface to the palates, to which are affixed artificial teeth, so that they may be "applied without the aid of springs." A scalpel has been found a convenient tool for effecting this.

[Printed, 4*d*. No Drawings.]

A.D. 1855, February 28.—N° 435.

ALLARTON, FREDERIC. — (*Provisional protection only.*) — "Certain improvements in the method of administering iron as a "remedy." These are "combining with the usual materials used "in the manufacture of biscuits, and other similar articles of food, "any of the oxides or salts of iron." They are afterwards baked.

[Printed, 4*d*. No Drawings.]

A.D. 1855, March 9.—N° 532.

BARNETT, FRANCIS AUGUSTUS.—(*Provisional protection only.*) —"An improvement in the manufacture of metallic bedsteads "and couches for the use of invalids, applicable to bedsteads "and couches made from any other material." This consists in having "an extra and upper frame, which is connected with the "bedstead beneath by cranks placed at each side." A canvass is "strained upon the upper frame, with a hole in the centre." By means of a handle, the "frame is raised sufficiently high in an "horizontal manner from the bedstead beneath, for the introduction of a bed pan, or for rearranging the bed," &c.

[Printed, 4*d*. No Drawings.]

A.D. 1855, March 14.—N° 577.

GOODYEAR, CHARLES, Jun.—"Improvements in the plates "of artificial teeth." This consists in "constructing the plates of "artificial teeth of the hard product obtained by compounding "india-rubber or gutta percha (with or without other matters), "with sulphur, and subjecting the same to a high temperature." An impression from the mouth is taken in wax; from this "again a plaster cast is taken." Upon this cast the teeth are adjusted, and held in their position by wax; a thin layer of wax is spread over portions of the cast, which layer represents a model of the plate of caoutchouc, after which a cast of the same is taken. This, together with "the original plaster model, both of which it "is preferred to enclose in an iron rim, form a mould," which is used as follows:—The teeth are put into "their proper positions "in the mould; any vacant spaces are filled with the caoutchouc "compound; the several parts of the mould are put together, "and pressed, and the whole subjected to heat, to convert the "compound into the hard product."

[Printed, 4*d*. No Drawings.]

A.D. 1855, March 16.—N° 593.

WREN, JOHN WALTER CAWLEY—(*Provisional protection only.*) —"An improved construction of invalid bed." This consists in "attaching to the ordinary bedstead frame a rectangular frame "of a corresponding size, which carries a loose sacking, and is "provided with a suitable opening, to admit of the application "of the pan." This frame is attached "to the bedstead by two or "more pairs of parallel levers, jointed to the sides of the frames." "The levers at the foot end of the bed extend downwards," and are connected together by a bar, "which serves as a treadle to "raise the sacking frame."

[Printed, 4*d*. No Drawings.]

A.D. 1855, March 24.—N° 654.

LEWIS, GRIFFITH GEORGE, and GURNEY, JOSEPH.—"An "improved construction of knapsack, convertible, when required, "into a bed, a litter, or a tent." This "consists simply of a "*sheet of suitable* dimensions for lapping round and covering

" the soldier like a blanket, to which sheet a flexible compartment " for containing the soldier's kit is sewn." In the edges of the sheet are " eyelet holes for receiving cords, so as to contract the " sheet when it is to be used as a litter, or as a tent." The knapsack it is preferred " to construct of deodorized india-rubber " cloth."

[Printed, 6*d*. Drawing.]

A.D. 1855, April 11.—N° 796.

ALDERMAN, John.—" Improvements in the construction of " adjustable couches, chairs, and other similar descriptions of " furniture for invalides." These " consist in attaching to the " lower frame of such articles of furniture a rising frame, divided " into two or more portions, connected by joints or hinges, " and worked by means of screws and nuts in such manner, " that either of the said portions may be gradually elevated or " depressed, as it is desired to raise or lower the head, feet, " or knees of the invalid, or any parts of the body which are to " be operated on."

[Printed, 10*d*. Drawings.]

A.D. 1855, April 11.—N° 798.

HEMMING, Frederick Shand.—(*Provisional protection only.*) —" Improvements in the construction of buildings, which im" provements are particularly applicable to military and other " hospitals." These are lining the walls with a non-conducting material, preferring " peat charcoal, but any other suitable solid " deoderizing agent may be used, and it is to be applied to the " walls of the building between the outer covering and the inner " lining of the wall. Suppose the walls of the building to be " constructed of wood, sheet iron, or other suitable material ex" ternally, I propose to line the wall internally with some porous " or perforated material, such, for instance, as strong canvas, or " cloth, or perforated zinc, iron, or other material or wood, and " between the two coverings I place pulverized peat charcoal, or " other solid deodorizing agent, which will not only absorb all " disagreeable, noxious, and deleterious effluvia arising in the " building, but also will prevent the temperature of the air inside " from being greatly affected by the external atmosphere."

[Printed, 4*d*. No Drawings.]

A.D. 1855, April 14.—N° 824.

DENOUAL, Jules.—(*Letters Patent void for want of final Specification.*)—" Certain improved means of enveloping medicinal

" preparations with soluble substances." This consists, in "coat-" ing or enveloping pills with soluble substances, and of the " mechanical means" employed. A plate of metal or other suitable material provided with a handle by which it may be suspended when required, "has a number of finely pointed needles " projecting" from it, and having prepared the soluble substance " composed of gelatine, loaf sugar, gum arabic, and water, or " other suitable combinations," "in a suitable vessel, heated so as " to produce fluidity, I place on each of the needle points a pill " to be covered, and then cause the whole to be sufficiently im-" mersed in the soluble substance, so that when withdrawn" a thin coating is over each pill; when the coating is dry the pills are removed from the needle points, and the neck left to each pill at the point of junction with the needle is cut off.

[Printed, 6*d*. Drawing.]

A.D. 1855, April 16.—N° 834.

HOLMES, HENRY.—(*Provisional protection only.*)—"Certain " processes of treating the human body by gases, vapors, and " electricity, and for certain apparatus for obtaining and applying " the said gases, vapors, and electricity to the above or any other " purposes." These are, first, "treating the human body by " partial and entire immersions in any gases or vapors posses-" sing a medicinal or agreeable influence when imbibed through " the skin or otherwise, while the electrical condition of the body " is, if necessary, suitably modified."

Second. "An apparatus to be called the pneumatic bath," in connection with which are employed "tubes of india-rubber or " gutta percha, and especially of the vulcanized gutta percha, " for the production of which Letters Patent have been obtained " by William and James Ryder."

[Printed, 4*d*. No Drawings.]

A.D. 1855, April 18.—N° 850.

DANCHELL, FREDERICK LUDEWICK HAN.—(*Provisional protection only.*)—"Improvements in apparatus for increasing, ex-" hausting, or regulating fluids, and indicating pressure."

This invention consists partly in the "extension or compression " of a spring or springs or other elastic bodies for regulating and " indicating pressure, such as steam in a boiler, the force of the " wind, the strength of the lungs, or currents of water, by means " of a jet or jets of steam, air, water, or other fluid." "The

" said jet or jets in their passage through an open tube in which " an orifice is made communicating with the vessel or tube con- " taining the liquid or elastic or solid body used as the medium " for indication, produces in them the corresponding amount of " rarefaction or exhaustion or partial exhaustion or causing the " liquids or elastic or solid body to rise or fall, or the springs or " other elastic medium to be compressed or extended, as the " case may be, in proportion to the velocity and force of the jet " or jets."

[Printed, 4*d*. No Drawings.]

A.D. 1855, April 21.—N° 893.

SCHOOFS, Henri.—" Improvements in making, fixing, or " attaching artificial teeth, gums, and palates." These are, using " gutta percha or caoutchouc, " separately or mixed together, or " modified with other gums, as follows :—" Take the mould of " the maxillary roof or palate with soft wax, and let plaster flow " thereon ;" this " is a model for casting a third reproduction in " iron, copper, zinc, or other metal." " On the plaster the arti- " ficial teeth, mineral or otherwise, are adjusted and secured, as " is known to dentists, from this point the improvements com- " mence." " Take the metal mould and heat it sufficiently," and " apply on all the corresponding parts near the impaired maxil- " lary roof or palate a layer of gutta percha," &c., " on this " layer, and at their respective places, the adjusted (as before " described) teeth are placed, and all the fixings of wire or plates " are covered by another layer." The springs connecting the " upper and lower piece is coated with the gutta percha," &c., and " cover those parts, replacing the natural gums, palate, or " roof of the mouth, that is to say, the internal part of the piece " or pieces, with a pellicle of gold, by the assistance of the plastic " galvanic pile."

[Printed, 4*d*. No Drawings.]

A.D. 1855, April 25.—N° 937.

JEFFREYS, Julius.—" Improvements in engines or machines " for raising, diffusing, or injecting fluids." These relate to " a " shower bath machine," " an enema machine," and " a garden " engine." The " enema machine " consists as follows :—A vessel in which the fluid to be injected is put, this has a tube extending from the bottom of the fluid out through the top ; it " has a spherical valve there at its mouth to prevent any return

" of liquid;" to this tube is attached "an injection pipe;" on the top of this vessel is screwed "an air pump, formed of an air-proof " flexible casing over a spiral ring, which expands the pump. " The top and bottom are of stiff material, and have each a valve " and opening downwards, so that by compressing the pump, air " is forced into the air space over the liquid in the vessel." The other machines above alluded to are constructed upon the same principle.

[Printed, 8*d*. Drawing.]

A.D. 1855, May 7.—N° 1022.

LEWIS, James.—"An improved soap." This soap, it is said, is "highly advantageous in most cases of skin disease." If no potash is in the soap, it is added: two drachms of it, and two of iodine to the pound are recommended: but what is claimed is, the " combining with the materials ordinarily used in the manufacture of soap, iodine in any of its forms."

[Printed, 4*d*. No Drawings.]

A.D. 1855, May 12.—N° 1070.

ROBINSON, George.—"An improved invalid's bed." This is said to consist, first, "In the construction and arrangement of " apparatus for raising and lowering the patient in a horizontal " position."

Second. "The construction and arrangement of apparatus for " raising and lowering the trunk or upper part of the body."

Third. "The construction and arrangement of apparatus for " keeping a fractured limb in a fixed position, whether the said " improvements be used conjointly or separately."

In carrying out the first part of this Invention, "a framework" is made "about the size of the bed, to which is fastened a strong " tick," which forms a sling or hammock for the patient to lie on. A longitudinal shaft, with drums under the bed, revolves by means of straps, and by an arrangement of pullies "the sling " or hammock" is raised "in a horizontal position completely " off the bed."

In carrying out the second part of this invention, a roller is fixed in any suitable position, and a piece of canvas is wound round it, and its end fastened to the under side of the feather bed or mattress; a wheel and rack moves the roller, and by turning the wheel "the material or trunk sling is wound on the roller, and " *becomes shortened,* thus raising the upper part of the body " *towards an errect* position."

In carrying out the third part of the invention, "suspending "from the centre beam of the frame a small sling, quite separate "and independent of those already described." "To raise or "lower this small sling or hammock," "pass the cord which "suspends it over a pulley and roller, which roller can be turned "by a handle, and held in check by a ratchet wheel, and catch "or lever."

[Printed, 10*d*. Drawing.]

A.D. 1855, May 28.—N° 1220.

SALT, THOMAS PARTRIDGE.—(*Provisional protection only.*)— "Improvements in the construction of artificial legs." These are "substituting for the complicated mechanisms employed for "obtaining the movements in an artificial leg, a cord of vulcanized india-rubber, or other equivalent elastic material, which "is secured to certain fixed points, and passes over friction rollers "under the knee, and at the instep of the foot, a check string of "catgut or other suitable material being employed as usual."

[Printed, 4*d*. No Drawings]

A.D. 1855, June 2.—N° 1265.

GALANTE, HENRY.—(*Provisional protection only.*)—"An im"proved surgical injection bottle." This consists "in manu"facturing injection bottles of an elastic or other material, of "such a form as will enable them to stand upright when placed "on a flat surface."

[Printed, 4*d*. No Drawings.]

A.D. 1855, June 6.—N° 1291.

LOLMÈDE, PAULIN.—(*Provisional protection only.*)—"A new "instrument for the administration of medicinal substances." These are of "a cylindrical shape, each end is rounded off, and at "their periphery there are small recesses or cells for the purpose "of containing the necessary pharmaceutical preparations. They "are provided with a small string fixed at one of the ends, "passing through a central perforation, and issuing at the oppo"site end." They are made by moulding pulverized carbonate of iron, the ashes of mineral coal, and starch, or wheat flour, "mixed with about an equal quantity of water."

[Printed, 4*d*. No Drawings.]

A.D. 1855, June 6.—N° 1295.

NUNN, *HENRY*.—"Improvements in the construction of car"riages for invalids and children, part of which improvements is

" also applicable to street cabs and other carriages." These are, " first, the general arrangement, whereby the several parts may " be made to fold over and fit into each other." Second, " the " construction of and mode of adapting the fore carriage to the " other part of the vehicle."

To attain these objects, " construct the main body of the carriage of two curved metal frames, which joint together and " shape, so that they will fold the one within the other. The " arms and back of the carriage form a third frame, which joint " to the hind frame in such a manner that it will fold down " within the hind frame, and secure it in position by means of " a spring catch or catches." It is proposed to mount " this " folding carriage upon two pair of wheels. The wheels of the " front pair are adapted to a peculiar construction of guiding " apparatus, consisting of a moveable frame connected to the " front corners of the carriage frame. This guiding apparatus " consists of two forked or slotted arms, between the forks of " which the fore wheels are respectively mounted, and these two " slotted arms are jointed by means of pins or studs to a parallel " bar fixed to the front part of the carriage. At the opposite end " of the slotted arms is another cross bar, to which they are " jointed, for the purpose of keeping them always parallel to each " other."

[Printed, 8*d*. Drawing.]

A.D. 1855, June 13.—N° 1348.

BLACKMAN, William John.—(*Provisional protection only.*) —" A new medicine or syrup for the cure of coughs." This " consists of a preparation of thyme, sugar candy, and beer, with " or without other ingredients ;" these are mixed together and evaporated " slowly by simmering till reduced to about half the " quantity."

[Printed, 4*d*. No Drawings.]

A.D. 1855, June 26.—N° 1463.

RAUX, Felix, and PORET, Louis.—(*Provisional protection only.*)—" Improvements in the preparation of artificial mineral " waters." These relate to apparatus, and consist " of a cylin- " drical or other shaped vessel, upon the top of which is fixed " a cover," in the centre of which, " a hole is made to admit a

" spindle, having attached to it several arms or blades of a suitable " shape, for the purpose of agitating the liquid. This spindle is " turned by hand or other means, and works in a step or bearing " placed at the bottom of the vessel or reservoir, which is pro- " vided with a stop-cock for the purpose of drawing off the " prepared waters."

[Printed, 4*d*. No Drawings.]

A.D. 1855, July 6.—N° 1518.

DURANT Anguish Honour Augustus.—" An improvement " in extracting castor oil." This consists " in depriving the " castor seeds of the outer skin or cuticle " by " means of rollers " or stones or other similar processes previous to crushing, " treating, sieving, and heating them, thus producing a clearer " and finer oil than heretofore, and with a much less waste of " material, and which oil I purpose calling 'castrine.' "

[Printed, 4*d*. No Drawings.]

A.D. 1855, July 13.—N° 1574.

GILLET, Eugène.—(*Letters Patent void for want of final specification.*)—Improvements in fixing artificial teeth. These are as follows :—fixing " the front single teeth by soldering a pin on to " the base plate; this pin slides into a groove in the back of the " tooth. The groove and pin are dovetailed; the tooth is sliden " on to the pin, and then fixed by a fine screw, which enters at " the back of the pin into the tooth." To fix the back teeth, " make an oval hole in the base of the tooth, which enters about " three quarters up the tooth, and at the top of the oval hole is a " circular recess. Two small hooks are soldered on to the base " plate; these hooks, which are forced apart by a pin which " passes between them, enter the oval hole in the tooth, and the " tooth is fixed by being turned a quarter round, the ends of the " hooks entering the circular groove at the end of the oval hole."

[Printed, 4*d*. No Drawings.]

A.D. 1855, July 13.—N° 1577.

YEATES, Robert.—" Improvements applicable to the instru- " ments termed 'lock' knives and 'lever' knives, part of said " improvements being applicable also to such surgical and other " instruments as may be connected to handles by moving joints."

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" adhesive tapes, or by a combination of both," so as to form an oblong square. The corners are made waterproof by triangular pieces, which are loose, and which, on the side pieces of the mattress being raised perpendicularly, admit of the ends being raised in like manner, and when they are fastened to the sides by strong straps, &c., the mattress is converted into a boat, raft, or pontoon. There are rings at the ends for connecting any number of the mattresses together for a raft, floating battery, or pontoon bridge. In the middle of each side is a loop to serve as rowlocks for propulsion by oars. In pontoons, bridges, or floating batteries, planks are laid on the top. The ambulance is composed of two side pieces and two or more cross pieces, which fit into mortices in the side pieces, and are kept in their places by pins, &c. At each side and ends are placed upright rods, from which is suspended on bands of elastic webbing the mattress. The tent, waterproof or not, hangs from the boat-hook, which is supported by the oars.

[Printed, 10*d*. Drawings.]

A.D. 1855, July 28.—N° 1716.

ABRAHAM, HENRY ROBERT.—(*Provisional protection only.*)—
" A carriage on two wheels for passenger traffic, and general con-
" veyance of a number of persons, or invalid or wounded persons,
" to be called a rotalta." This consists of "an arrangement and
" adjustment of the body of the carriage, its seats, and springs,
" which admit of their being carried on one axle with ease and
" security, the seats on the roof being nearly perpendicularly
" over the axle across the carriage in a line with the axle."
" When fitted for an invalid carriage, the shelves on which the
" patient reposes run on friction rollers, and have eyes to receive
" bearing poles."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 9.—N° 1806.

SLEIGHT, THOMAS.—" An improved compound for curing
" disorders of the bowels, cholera, diarrhæa, and dysentery."
This consists of "the apple of the pinus picea, or silver fir tree,
" which must be pulverized," and to it "add a certain quantity
" of the essential oils of cassia, of peppermint, of cloves, and
" of nutmeg, or of their equivalents, dissolved in spirits of
" wine." To this mixture "add tincture of opium diluted with

" adhesive tapes, or by a combination of both," so as to form an oblong square. The corners are made waterproof by triangular pieces, which are loose, and which, on the side pieces of the mattress being raised perpendicularly, admit of the ends being raised in like manner, and when they are fastened to the sides by strong straps, &c., the mattress is converted into a boat, raft, or pontoon. There are rings at the ends for connecting any number of the mattresses together for a raft, floating battery, or pontoon bridge. In the middle of each side is a loop to serve as rowlocks for propulsion by oars. In pontoons, bridges, or floating batteries, planks are laid on the top. The ambulance is composed of two side pieces and two or more cross pieces, which fit into mortices in the side pieces, and are kept in their places by pins, &c. At each side and ends are placed upright rods, from which is suspended on bands of elastic webbing the mattress. The tent, waterproof or not, hangs from the boat-hook, which is supported by the oars.

[Printed, 10*d.* Drawings.]

A.D. 1855, July 28.—N° 1716.

ABRAHAM, Henry Robert.—(*Provisional protection only.*)—
" A carriage on two wheels for passenger traffic, and general con-
" veyance of a number of persons, or invalid or wounded persons,
" to be called a rotalta." This consists of "an arrangement and
" adjustment of the body of the carriage, its seats, and springs,
" which admit of their being carried on one axle with ease and
" security, the seats on the roof being nearly perpendicularly
" over the axle across the carriage in a line with the axle."
" When fitted for an invalid carriage, the shelves on which the
" patient reposes run on friction rollers, and have eyes to receive
" bearing poles."

[Printed, 4*d.* No Drawings.]

A.D. 1855, August 9.—N° 1806.

SLEIGHT, Thomas.—" An improved compound for curing disorders of the bowels, cholera, diarrhæa, and dysentery." [illegible] consists of "the apple [illegible] the pinus picea, or silver fir tree, [illegible] be pulv[illegible] to it "add a certain quantity [illegible] peppermint, of cloves, and [illegible]nts, dissolved in spirits of [illegible]cture of opium diluted with

These consist in "making such knives "with several distinct "pairs of 'scales,' so as to form several distinct parts, which "may be separated from each other, and yet may, by means of "the locking mechanism belonging to such parts, be all secured "together, forming one compound instrument like the present "lock knife; also the instrument is provided with a knife, fork, "and spoon, all opening and shutting upon joints." "It is provided with a lever knife for cutting or ripping open preserved "provision cases and other uses." It may also contain another lever knife or knives. "The parts are secured by the usual "locking mechanism, or by transverse slots in the scales into "which the usual pins fit," and are secured by a spring slot or catch. "The joints are constructed by having notches in the end "of the tang, into which a pin or projection, pins or projections, "will be introduced by means of a spring catch, a catch on a "sliding piece, or otherwise;" the instruments are made "removable from their handles by having the notch or notches at "the end of the tang thereof, into which fits the pin or projection, "pins or projections, secured by a sliding wedge piece and spring "catch or catches."

[Printed, 10*d*. Drawing.]

A.D. 1855, July 13.—N° 1582.

NEALE, Charles Lanchester.—(*Provisional protection only.*) —"A new medicinal lotion to be called the Crimean neuralgic "specific." It consists of rose water, best white vinegar, and laudanum, mixed together. The proportions given are recommended, but they "may be altered."

[Printed, 4*d*. No Drawings.]

A.D. 1855, July 26.—N° 1695.

BEATTIE, James.—"A combination or contrivance of a folding "mattress (with or without a tent attached) hut, ambulance for "conveyance of wounded or sick persons, pontoon, raft, and "boat, portable cistern, and bath." A mattress is made in five compartments, one centre piece (an oblong square), and two side pieces and two end pieces, the stuffing being encased in cloth stitched through at proper distances. Each part is covered with waterproof canvas, &c., and the pieces are connected "by sewing "*the inner* edges together, or connecting them by means of

" adhesive tapes, or by a combination of both," so as to form an oblong square. The corners are made waterproof by triangular pieces, which are loose, and which, on the side pieces of the mattress being raised perpendicularly, admit of the ends being raised in like manner, and when they are fastened to the sides by strong straps, &c., the mattress is converted into a boat, raft, or pontoon. There are rings at the ends for connecting any number of the mattresses together for a raft, floating battery, or pontoon bridge. In the middle of each side is a loop to serve as rowlocks for propulsion by oars. In pontoons, bridges, or floating batteries, planks are laid on the top. The ambulance is composed of two side pieces and two or more cross pieces, which fit into mortices in the side pieces, and are kept in their places by pins, &c. At each side and ends are placed upright rods, from which is suspended on bands of elastic webbing the mattress. The tent, waterproof or not, hangs from the boat-hook, which is supported by the oars.

[Printed, 10*d*. Drawings.]

A.D. 1855, July 28.—N° 1716.

ABRAHAM, Henry Robert.—(*Provisional protection only.*)—
" A carriage on two wheels for passenger traffic, and general con-
" veyance of a number of persons, or invalid or wounded persons,
" to be called a rotalta." This consists of " an arrangement and
" adjustment of the body of the carriage, its seats, and springs,
" which admit of their being carried on one axle with ease and
" security, the seats on the roof being nearly perpendicularly
" over the axle across the carriage in a line with the axle."
" When fitted for an invalid carriage, the shelves on which the
" patient reposes run on friction rollers, and have eyes to receive
" bearing poles."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 9.—N° 1806.

SLEIGHT, Thomas. — " An improved compound for curing
" disorders of the bowels, cholera, diarrhæa, and dysentery."
This consists of " the apple of the pinus picea, or silver fir tree,
" which must be pulverized," and to it " add a certain quantity
" of the essential oils of cassia, of peppermint, of cloves, and
" of nutmeg, or of their equivalents, dissolved in spirits of
" wine." To this mixture " add tincture of opium diluted with

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children's carriages or
s." This consists in con-
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" water, and thus complete the compound. These materials may " be compounded together in various proportions." The " com" bination of ingredients " is claimed, and " particularly the " employment, for the purposes above mentioned, of the apple of " the pinus, or the silver fir tree."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 15.—Nº 1846.

COGHLAN, John. — (*Provisional protection only.*)—" An im" proved method of pivoting artificial teeth." This consists " in " the use of a capillary tube, instead of the solid wire now " used." It allows " the air to escape," and " affords a ready mode " of giving exit to the secretion."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 22.—Nº 1897.

DE BUSSAC, Dupont.—" The combination of hydriodic acid, " watery or oily, or salts of iodine, with tannic acid, the con" stituting parts of chinchona, or of sarsaparilla, or of the leaves " of the walnut tree, and iron, or with one or several of these " bodies."

First. Distilled water, tannic acid, and an equivalent, or a multiple equivalent of iodine, are heated together, "until the " iodine be transformed into hydriodic acid;" instead of the iodine, hydriodic acid may be used." The raw alkaloids of cinchona, or their salts, are dissolved similarly in hydriodic acid. On mixing these two liquids, " there is formed a double hydrio" date of tannin and cinchona quinine alkaloids." Iodide of iron is dissolved and mixed with the above solution of tannic acid; this solution assumes a green colour, which is " got rid of " by mixing a little loaf sugar with the liquid," or " syrup of " iodide of iron."

Second. " The extract, more or less concentrated, of cinchona," may be treated as above.

Third. "The powder of cinchona is treated by the method of " displacement, by means of the hydriodic acid liquid." On analysing the result, if either iodine, alkaloids, or tannin be awanting, they are to be added. Iron may be added as above.

Fourth. " Powder of cinchona, distilled water, and liquid " hydriodic acid," by boiling, forms " hydriodate of cinchona."

" Sarsaparilla and walnut leaves," are treated in this way, or by the process of displacement.

Fifth. Oil is substituted for water in the above processes " Fatty hydriodates are thus formed."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 25.—Nº 1930.

HARDY, ADAM HALL, and FORDOFF, JACOB HARDY.—" A " compound pill and ointment for the cure of scorbutic and " similar disorders of the human body." The pill is composed of "socatrine aloes, cape aloes, powder jalap, syrup of buck- " thorne, sweet almonds, boiled together over a small fire, until " the consistency thereof is fit for pills," when calomel is added, and the whole formed "into five grain pills."

The ointment is composed of lard, white precipitate, red precipitate, turmeric, and "oil of origanum," well mixed up together.

Quantities are given, but it is stated that they do not confine themselves "to the precise details."

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 27.—Nº 1933.

CAPRON, CELSE EUGÈNE.—" An improved cupping appa- " ratus." This consists as follows :—" A strong vulcanized " india-rubber ball is firmly cemented, or otherwise secured to " two brass caps or fittings, one at top and the other at bottom, " in each of which are screwed two valves, "each opening up- " wards, allowing the air to pass through a small hole made in " them." To the lower brass cap is attached a stop-cock fitting into a similar cap, and this cap again is attached to a cup, "composed of glass or other suitable material. The stop-cock regulates the partial vacuum in the cup. A modification of this apparatus is described.

[Printed, 8*d*. Drawing s.]

A.D. 1855, August 27.—Nº 1938.

SMITH, JAMES.—" Improvements in children's carriages or " perambulators, and invalid carriages." This consists in constructing such carriages, which are " pushed or driven from " behind," of sheet metal.

[Printed, 4*d*. No Drawings.]

A.D. 1855, August 30.—N° 1962.

JENNINGS, Henry Constantine.—(*Provisional protection only.*)—"An improved compound or medicine for cholera and "diarrhæa." This consists of "anhydrous acetate of ammonia, "tinctura opii (tincture of opium), tinctura guava (?) ammoniata "(ammoniacal tincture of guaiacum), creta preparata (prepared "chalk), sulphuric ether, essential oil, menthæ piperatæ (of "peppermint), syrupus simplex (syrup)."

[Printed, 4*d.* No Drawings.]

A.D. 1855, September 8.—N° 2037.

BIRD, James.—"An improvement in the manufacture of "biscuits." This consists in mixing ground vegetable charcoal with the flour, and afterwards manufacturing the biscuits in the ordinary way.

[Printed, 4*d.* No Drawings.]

A.D. 1855, September 11.—N° 2056.

LEBAIGUE, Francois Honore.—"An improvement in the "manufacture of chocolate." This consists "in combining cod "liver oil with chocolate" by mixing them together, and forming the compound in moulds. The compound "may also be mixed "with flavouring and other matters, and when desired with "other medicals," "such as sulphate of iron, or carbonate of "iron, the iodide of potassium, magnesia, tannin, and others."

[Printed, 4*d.* No Drawings.]

A.D. 1855, September 14.—N° 2073.

GARBAI, Jean Pierre.—"An improved powder or composi-"tion for cleaning and preserving the teeth." This powder is also "an antidote or preservation against tooth-ache." It may be composed of "sea salt," "iron in solution," "coffee, either "with or without chicory," "sugar," "rice flour," "saffron," "rhubarb." These are mixed together in a certain manner.

Instead of the sea salt being mixed with the foregoing, it may be mixed "with other substances possessing similar properties." When used in cleaning teeth, cream of tartar and ivory powder are added.

[Printed, 4*d.* No Drawings.]

A.D. 1855, September 14.—N° 2077.

DEWDNEY, George.—" An improved manufacture of pro-" tector, applicable to the chest, throat, and other parts of the " body requiring protection from the cold." This consists in " combining of layers or leaves of silk together." As an example, " construct a protector, composed of two, three, or more layers of " ribbed silk, sewn or otherwise connected together at one edge, " and cut to a form suited to the part to be protected from the " cold, and to these layers " " attach a band or strap for securing " the protector to the body of the patient."

[Printed, 6*d*. Drawing.]

A.D. 1855, September 28.—N° 2160.

THWAITES, John Hall Brock. — (*Provisional protection only.*)—" Improvements in the preservation of teeth, and in the " manufacture and application of artificial teeth." These consist " in the employment of the metal aluminium for the purpose " of stopping decayed teeth, and in the manufacture of arti-" ficial teeth or blocks, with the plates, pins, rivets, springs, or " other attachments for the same, either wholly or in part of " aluminium."

[Printed, 4*d*. No Drawings.]

A.D. 1855, September 29.—N° 2172.

HERAPATH, William Bird.—(*Provisional protection only.*)— " Improvements in the manufacture of surgical instruments." These are " in the manufacture of probes, directors, specula, " catheters, syringes, and other surgical instruments, either " wholly or in part, or covered or coated with the metal " aluminium."

[Printed, 4*d*. No Drawings.]

A.D. 1855, October 6.—N° 2237.

HESTER, James Torry.—" Improvements in invalid and chil-" dren's chairs." These are said to consist " in the mode of " combining the frame of the chair with the side and hind wheels, " and also applying the seat and other parts." For this purpose " a chair is arranged to move on four wheels, one on either side " and two at the back, all of which are connected to the axle or

" frame, composed of two sides and a back, made in one piece, or " framed together. The two side wheels turn on necks or axles " fixed to or forming part of the three-sided frame or axles. The " two hinder wheels are castor wheels, which, by their vertical " axles, can turn in any direction. The seat is attached or hinged " to the back part of the three-sided frame or axle; the arms of " the chair are also fixed thereto." "Each of the sides of th " chair is provided with a crutch, which may be made to fold, and " be adjustable in its length. In some cases a narrow adjustable " seat is provided, such as will enter between the legs of the person " using the chair, and give more or less support, and yet admit of " using the legs in order to walk, and thereby propel the chair. " The parts are so arranged and combined that when the seat is " down the chair may be used as an ordinary invalid chair, and " be propelled by the two side wheels, the use, however, of the " two hinder castor wheels rendering the chair more safe than " when one only is used. There is attached a folding foot-rest to " the seat of the chair."

[Printed, 1*s*. Drawings.]

A.D. 1855, October 19.—N° 2341.

SMITH, JOHN.—" Improvements in the construction of bed- " steads, such improvements being also applicable to carriages, " ambulances, and other articles." These are, "the application " and use of laths or springs of lance wood in the construction " or arrangement of bedsteads and other articles," as follows, so as to obtain great elasticity and freedom of motion. The rail or cross bars of the head or back end of a bedstead are so arranged as to furnish convenient resting places for the laths or springs of lancewood which are at different angles, as may be preferred; they are between the rails and project behind the head of the bedstead, and the other ends rest in notches slots or tenons in the foot end of the bedstead, or arranged otherwise. These portions of the rails at the head of the bedstead upon which the rails rest are provided with moveable reels, or the ends lay in loops or sockets fastened to the bedstead, composed of vulcanized india-rubber, gutta percha, &c. In order to secure uniformity of motion the laths or springs may be placed upon a sheet or between a double sheet of ticking or other suitable material. These springs, it is said, are applicable to a number of purposes, among which are named "invalid chairs, beds, or carriages, " leg rests, stretchers, litters, and ambulances for the sick and " wounded." It is proposed to place one of these springs below railway carriages at each side of the same, so as to link or connect them together, and much prevent the oscillation.

[Printed, 10*d*. Drawings.]

A.D. 1855, October 27.—N° 2407.

ABEL, Alfred.—(*Provisional protection only.*)—" Improvements " in stopping, filling, or plugging teeth, and in instruments to be " used therefor." These are, first, the use of a metallic plug or cap, by preference of platinum, made concave on the underside, so as to cover and protect the nerve in a carious tooth.

Second, using "concave or hollow drills, by means of which " teeth may be drilled or scraped without touching the nerve."

[Printed, 4*d*. No Drawings.]

A.D. 1855, November 1.—N° 2446.

TRUMAN, Edwin Thomas.—" Improvements in palates or " holders for artificial teeth." These are said to consist " in the " employment of aluminium, either alone or combined with gutta " percha, or with another metal, or with both." The object is to " secure with great lightness sufficient rigidity in the body of " the palate or holder." A stout wire or rod of aluminium is bent " to the shape required in such a manner that the teeth when " placed upon the bar and embedded in the gutta percha shall " occupy those places intended to be filled by artificial teeth." A " loop or eye attaches the tooth to the aluminium holder, after which " suitably prepared gutta percha " is applied " in a heated, " soft, and plastic state, in order to cause it to fill up the spaces, " and assume the form desired."

[Printed, 4*d*. No Drawings.]

A.D. 1855, November 10.—N° 2528.

PIGGOTT, William Peter.—(*Provisional protection only.*)—" Improvements in galvanic, electric, and electro-magnetic apparatus, and in the mode of applying the same as a curative " and remedial agent." These are first, constructing " a brush " *of a mixture of bristles* and metallic wires or plates," or coating

" a portion of the bristles with metal by electric deposition." These communicate with "a battery or electrical apparatus, fixed " in the frame of the brush or otherwise."

Second, forming a " bath of a combination of elastic or flexible " waterproof material and metal in such way that when a part of " the waterproofing material is caused to envelope any required " part of the body, two distinct currents of electricity, galvanism " or electro-magnetism, are created in the same bath."

[Printed, 4*d*. No Drawings.]

A.D. 1855, Noember 10.—N° 2531.

ESKELL, LOUIS. — (*Provisional protection only.*) — " A new " enamel for filling or stopping decayed teeth." This consists of " a combination of " stearic acid (commonly known as stearine), " New Zealand gum, pure sulphate of lime, blood shellac, and " carradan balsam. The stearine is first dissolved, and then the " New Zealand gum is mixed with the above, after which the " sulphate of lime is added, and a small quantity of blood " shellac, and finally the carradan balsam."

[Printed, 4*d*. No Drawings.]

A.D. 1855, November 13.—N° 2556.

ESKELL, FREDERICK ABRAHAM. — (*Provisional protection only.*)—" An improvement in plates for attaching artificial teeth." This consists in " covering such plates with enamel " to prevent corrosion, &c.

[Printed, 4*d*. No Drawings.]

A.D. 1855, November 19.—N° 2606.

LOPEZ, JEANNE BARBE VE. — " An antibilious powder." This consists of calcined magnesia and " finely reduced white " sugar mixed together in certain proportions and thoroughly " incorporated with essence of aniseed." The powder " may be " formed into lozenges or pills by means of gum water in the " usual way."

[Printed, 4*d*. No Drawings.]

A.D. 1855, December 8.—N° 2773.

FONROBERT, CHARLES FRANÇOIS JULES.—" An artificial " leech and sucker." This consists as follows, first, constructing it " with a cylinder and piston and a lancet, so arranged that

" motion may be communicated to the lancet by means of the " piston and rod."

Second, constructing it "with a circular or revolving lancet " connected to the piston by a spring or otherwise."

Third, constructing it "with a catch for securing the piston;" this is "a spring formed in the side of the piston-rod or attached " to it, so that when the piston is raised by its handle it may be " retained by the catch, which springs out after passing through " the cap" of the piston.

Fourth, constructing a sucker of a bent tube with a piston-rod provided with a catch." "This sucker is constructed in a " similar manner to the leech but without the lancet."

[Printed, 6*d*. Drawing.]

A.D. 1855, December 11.—N° 2795.

HORSLEY, John.—" Certain means of treating quinine, iodine, " and other mineral medicines, in order to cause them to com- " bine with cod liver oil, or any other fish oil, or with seed oil." Quinine and cinchonine are dissolved "in cod liver oil heated to " a temperature of about 140° Fahrenheit." Afterwards, this warm oil is triturated with iodine till its " solution has been " effected."

"To combine iodide of iron with cod liver oil" first dissolve the iodine in the oil at the above temperature, and add some " Quevennes iron (as reduced by hydrogen), heat for some time " at 180° F., and filter." Bromide of iron is combined much in the same way.

To combine acetate of iron mix acetate of potash with proto-sulphate of iron, dry the result and digest the powder with oil at 140 and filter.

To combine iodide of arsenic, iodide of arsenic and mercury, and iodide of zinc with oil, the oil is digested with these salts.

A combination is made by mixing oil with iodide of iron in solution and oil with quinine or cinchonine in solution. By these means solutions or combinations of other substances with oils may be made as the valerianates of quinine and of zinc, acetate of lead, iodide of sulphur. The proportions "for com- " bining these chemicals" are given, but they may be varied.

[Printed, 4*d*. No Drawings.]

A.D. 1855, December 18.—N° 2864.

HYDE, HIRAM.—(*A communication.*)—" An improved mode of " purifying alcohol or alcoholic spirits." This process, it is said, removes fusil and other oils dangerous in the production of chloroform tinctures, &c. This is effected by manganates and permanganates crude or otherwise. A solution of the " manganic " compound " in water is added " to the alcohol while the whole " is briskly agitated." The quantity varies with the nature of the alcohol. Dilute spirit is treated at once with the powdered salt. The purified spirit is distilled.

[Printed, 4*d*. No Drawings.]

A.D. 1855, December 19.—N° 2873.

SANDERS, JOSIAH.—(*Provisional protection only.*)—" Im- " provements in trusses for supporting parts of the human body." These relate to the springs for pressing the pads, and consist in making such springs in the form of a double spiral, the smaller diameter being at about midway of the entire length of the spring, similar to the springs employed in the seats of furniture. The spring is placed within the pad, and " is rendered more or " less powerful by a screw connected therewith."

[Printed, 4*d*. No Drawings.]

A.D. 1855, December 19.—N° 2874.

ABRAHAM, HENRY ROBERT.—" Improvements in carriages, " and in certain appurtenances and appendages which belong to " those used as hospital conveyances or ambulances." These are, first, hanging, supporting, and converting to different uses the back seat and foot-board of a carriage for the above purpose by a system of chains and hinges and props, " by which their " position is transposed or altered, and an amputating table or a " shelf for luggage is quickly formed."

Second, " the folding canvass hood or colosh over the seat at " the back of the carriage."

Third, " sliding perforated zinc, metal, or gauze shutters " and the curtains " to overhang them, which roll conveniently up under " the roof, and are secured by straps and buttons."

Fourth, the surgeon's platform, from which the patient may be tended while the carriage is in motion.

Fifth, lifts for "the patients which form at once beds and "litters, and which may be instantly expanded from a rolled "up state and fixed open by hinged stays or stretching pieces "morticed into the sides ready for the reception of the patients. "These litters have strong waterproof or other flexible fabric "fastened to the sides," which sides are "of ash or other strong "wood and have friction rollers at their ends, and may be rapidly "and easily run into slides of the carriage made to receive "them, where they are kept by stops." Where lightness is an object, the well at the bottom of the carriage may be dispensed with, and a straight axle substituted for the cranked one. The springs are made of india-rubber. An outrigger "for an additional horse may be fixed on either side of the carriage."

[Printed, 1*s.* 10*d.* Drawings.]

A.D. 1855, December 21.—N° 2892.

TOMLINSON, MATTHEW.—"An improved medical plaister." This is made by combining cod liver oil and litharge by boiling the same together, with or without "any resinous "substances."

[Printed, 4*d.* No Drawings.]

1856.

A.D. 1856, January 3.—N° 14.

HAINES, FREDERICK.—"The deadening of the sound and the "prevention of vibration and concussion in connection with "machinery, gun and mortar boats, and general ordnance, and "other purposes." This consists in "the application of cork "either in conjunction with other materials, or cork only," to various purposes. In relation to this subject it is stated that "cork is also applicable for splints and various surgical purposes "where wood and zinc are now employed."

[Printed, 4*d.* No Drawings.]

A.D. 1856, January 5.—N° 46.

COXETER, JAMES.—(*Provisional protection only.*)—"An im-"*provement in an* apparatus for generating steam for medical

" and other purposes." This consists of a cistern enclosed in a steam chamber having an iron tube closed with a cap at its lowest extremity and thrust " into a fire." A pipe comes from the bottom of the cistern into this iron tube and delivers water by drops into it; there is an exit tube from the steam chamber, and by connecting to it " an elastic or other tube the steam may " be conveyed to any distance."

[Printed, 4*d*. No Drawings.]

A.D. 1856, January 7.—N° 54.

BARTER, THOMAS.—(*Provisional protection only.*)—" An im- " proved apparatus for administering vapour and douche baths." This consists, of " a dome-shaped vessel for containing water " into the upper part of which is soldered or otherwise fitted a " collar ground true on the inside. Into this collar I drop a stop- " cock, the lower part of which is also ground to fit the inside of " the collar. The upper end of the stop-cock is furnished with a " pin, while a rose or perforated spreader is cut with a vertical " and horizontal slot, which, on being placed on the stop-cock, " forms with the pin a bayonet joint. A screw might be substi- " tuted for this joint. When for administering a douche bath, " instead of a rose or spreader, I fit telescopic tubes carrying a " spreader at their further end, and fitted with suitable joints." The vapour bath rose is perforated all round the sides but not the tops. This vessel is dropped into a suitable frame into which, by preference, " I fit a spirit lamp."

[Printed, 4*d*. No Drawings.]

A.D. 1856, January 8.—N° 61.

TRUMAN, EDWIN THOMAS.—" Improvements in artificial " palates and teeth." This consists in " the embedding or com- " bining of wire gauze or metallic network in any suitable " mineral substance employed in the manufacture of teeth." The wire gauze is inserted " into the tooth or teeth, or into the palate " in the manner and position best adapted for affording the most " extended medium of attachment to the gutta percha, resinous " or metallic substances, with reference to the situation which " the tooth or palate is intended to occupy in the mouth."

[Printed, 4*d*. No Drawings.]

A.D. 1856, January 16.—N° 115.

SCULLY, Vincent, and HEYWOOD, Bennett Johns.—"Improvements in the construction of inkstands, applicable in "part to other vessels for the reception of fluids." The improvements relating to this subject are in "a syringe for surgical "purposes" and an "infant's feeding bottle." In syringes applying self-closing "valves of thin vulcanized sheet rubber," they are discs cut across, secured on the ends of a tube of vulcanized india-rubber in the interior of a rigid chamber; "supply "and discharge pipes" are attached to the opposite ends of the instrument. In infants' feeding bottles, on the top "is a hollow "plug for admitting the food as usual," and "provided with an "india-rubber valve," "which is capable of yielding to the pres"sure of the air as the child withdraws the food" by a nipple at the end of the bottle, "permitting air to pass into the bottle "to occupy the displaced food."

[Printed, 8*d*. Drawing.]

A.D. 1856, February 13.—N° 367.

KNIGHT, Richard.—"Improvements in medical chests." This consists of an inner and outer chest; the front of the outer case falls down, the inner case has a folding top and folding front, the back of the inner case has appropriate fittings, "and within "this back, properly concealed, are projecting plates" "which "fit into recesses in the back," and "to each of these plates" is attached "a slotted connecting link" which admits of the parts of the folding top "opening so far that each half, when opened "stands vertical."

[Printed, 6*d*. Drawing.]

A.D. 1856, February 27.—N° 499.

FONTAINEMOREAU, Peter Armand le Comte de.—(*A communication*.)—"A new cicatrising preparation." This consists of the following ingredients:—"solanum nigrum (morelle), bal"samina impatiens, thymælea (daphne), solanum scanden, sym"phitum (officinalis), flower and seed of the hypericum, sedum "minus, flower of sulphur, Venetian turpentine, saffron, wine, "olive oil."

The plants are first left to infuse in the wine during about twenty-four hours, "and the whole boiled about six hours." The clear liquid thus obtained is mixed with the oil "and boiled ten "hours;" after this operation the turpentine, saffron, and sulphur are added, and the whole allowed to simmer "about twelve "to fourteen hours." The quantity of each material is given, but the quantities may be varied.

[Printed, 4*d*. No Drawings.]

A.D. 1856, March 1.—N° 529.

DEWAR, Henry Ardrew.—"Improvements in conveying or "transmitting motion for effecting mechanical operations." These are, first, "the general arrangement and construction of jointed "spindles or shafting carried or supported or covered by jointed "tubes for transmitting rotatory motion to instruments or tools."

Second, "the system or mode of actuating rotatory instruments "or tools by means of any convenient number of spindles or "lengths of shafting connected together by universal joints. and "carried or sustained in or covered by tubes connected together "by spherical joints."

The workshop "is fitted up with some continuously available "source of power, such as an overhead vertical shaft," the lower end of which is connected to the "articulated chain of shafting 'long enough to reach" to any part of the room. The joints are known as "Hooke's joints, or universal joints," "either open "Hooke's joint or modifications thereof, or the solid spherical "joint of the class introduced some years ago by Mr. John "Bodmer." Among many applications, it is stated that "the "mechanical dentist may facilitate his operations very greatly by "the aid of this system of operating, as the fine tools employed "in his minute work may be thus applied in a most effective "manner either upon work in the hand, on the bench, or in the "vice, and particularly in a patient's mouth."

[Printed, 10*d*. Drawing.]

A.D. 1856, April 2.—N° 799.

HINE, Henry George.—"Improvements in children's and "invalid's carriages, called perambulators." These are, "the "body of the carriage is made to separate from the frame and "wheels, and is of a form suitable to be used as a chair when so "separated. The child may be placed in the chair which may "be then attached to the frame and wheels, or the body may be "fixed to and form part of the framing of the carriage." In order to prevent accidents by the carriages running away down inclines, "on leaving hold of the handle at the back," "the handle "is made with or in connection with a break or breaks, to act on "the hinder wheel or wheels, or otherwise to stop the carriage at "all times when the handle is not pressed on in the act of moving "forward the carriage." "The break or breaks will be removed "immediately on pressing or acting on the handle to move "forward the carriage."

[Printed, 6*d*. Drawing.]

A.D. 1856, April 18.—Nº 932.

JEFFREYS, JULIUS.—"Improvements in instruments for aiding "respiration." These are, first, "for the metal fabric of the "operative part of the instrument, employing flattened spiral "coils of wire, between the coils of which the currents of the "breath pass transversely." By this arrangement "all horizontal "bars or wires arresting the descent of moisture may be avoided."

Second, rendering the warming power of the instrument variable, "not by varying the number of layers, as hitherto, but by "rendering variable at will the distances between the parallel "wires themselves of each layer," whether of "coiled fabric or "otherwise." When perforated metal plates are employed, the plates are made "to slide over each other."

Third, in the form of respirator described in Nº 12,984, Old Law, "in which the currents of breath are made to traverse longi- "tudinally through the courses of metal, and parallel to their "direction instead of transversely," employing "cylindrical or "flattened coils of wire, plain or twisted, and known as bullion, "to form flexible tubular passages, along the hollow spaces of "which the currents pass."

[Printed, 10*d*. Drawing.]

A.D. 1856, April 26.—Nº 1001.

HILLES, MALCOLM WILLIAM.—(*Provisional protection only.*)— "Improved apparatus applicable to the treatment and cure of "rupture, prolapsus uteri, and other protusions of the viscera." This consists in making pads which expand; they are constructed of two dish-shaped plates, connected together "by a central regu- "lating screw, provided with a milled head. This screw passes "through the outer plate, and takes into a tapped socket, "attached to the inner face of the other plate; guide pins ensure

" the parallelism of these plates." These pads are applied by preference in pockets "in tight-fitting drawers," "or the pads " may be fitted to belts or bands."

[Printed, 4*d*. No Drawings.]

A.D. 1856, May 12.—N° 1119.

NEWTON, William Edward.—(*A communication from George Denison.*)—" Certain improvements in machinery for pumping and " forcing water and other fluids." These are, first, the employment for pumping or forcing water and other fluids of an elastic tube, so acted upon externally by the pressure of rollers or their equivalents, as to be alternately collapsed or closed and allowed to recover itself, and thus alternately to form a vacuum in the tube into which the water or fluid is drawn, and expel the water or fluid from the tube.

Second. " Equalizing the resistance of the tube, by a truncated " cone, or a gradually diminishing thickness at that part where " the roller or rollers, or their equivalent, leave the tube, in " combination with a lift below or at the back."

Third, "relieving the tube from the pressure of the roller, or its " equivalent, by means of cams and sliding journal boxes or " bearings, substantially."

Fourth, "attaching the tube to the circular framing," by " forming the latter in two parts, and providing a lip or bead on " the former." The tube "is clamped between the two parts of " the frame." This invention it is said may be applied among other things "to the purpose of stomach pumps, and apparatus " for injections."

[Printed, 8*d*. Drawing.]

A.D. 1856, May 22.—N° 1221.

DEMPSEY, William Churchill.—" A compound for remov- " ing all obstructions of the air passages." This consists of " tincture of squills, rectified spirits of wine coloured, compound " spirits of ammonia, tincture of cayenne pepper, pure water, " enough to make up an eight ounce bottle, and to be called " Ramah Droogh." In the Provisional Specification the quantities of each substance to be employed is given, no quantities are given in the full Specification.

[Printed, 4*d*. No Drawings.]

A.D. 1856, June 24.—N° 1478.

TAYLOR, John.—“An improved vessel for containing chemicals “for the generation of disinfecting gases.” This consists in “fixing above the mouth or orifice of a vertical vessel of glass or “earthenware for containing the chemicals, a cross bar of wood “or other non-corrosive substance; the cover of the vessel having “attached to its under side a ring of vulcanized india-rubber, is “fixed to a screw which works through a nut formed in the “before-mentioned cross bar, over the centre of the orifice or “mouth. By the action of the screw the cover attached to it “may be depressed, so as to compress the india-rubber ring “between the cover and the margin around the orifice of the “vessel, and effectually to close the latter. By the contrary “action it may be as readily opened to permit the confined “gases to escape.”

[Printed, 10*d*. Drawing.]

A.D. 1856, June 28.—N° 1520.

WHITE, George.—(*A communication from Dr. Antelme.*)—(*Provisional protection only.*)—“An improved poultice.” This consists of “a small bag or sachel of linen, or other suitable “material,” filled “with tinder-agaric or amadow, in a suitably “divided or pulverized state, and which may imbibe any medicinal liquid required.”

[Printed, 4*d*. No Drawings.]

A.D. 1856, July 7.—N° 1598.

CONDY, Henry Bollmann.—“Improvements in defecating or “purifying acetic acid and other solutions, also in disinfecting “rooms and other places, and in preserving wood.” These are, in reference to this subject, for disinfecting rooms and other places, using manganate or permanganate of soda or potash, by exposing them “in small quantities in the room or other place “which it is desired to disinfect.”

[Printed, 4*d*. No Drawings.]

A.D. 1856, July 24.—N° 1754.

ASHMAN, James.—“Improvements in the manufacture of “artificial limbs.” These are, first, manufacturing the principal

" parts of artificial limbs of prepared hide or leather, papier " maché, or vulcanite."

Second, "the hip piece," a "triangular-shaped piece of pre- " pared hide or leather, secured to the high part of the leg by a " pin or screw, on which it turns freely." Two bands of vulcanized india-rubber likewise connect it with the leg, which causes it to adapt "itself to the movements of the body." A joint which connects the thigh and leg pieces together. It is of metal; the lower part of the joint is of a circular form, and the upper part is the same, and they are connected together by a pin. This joint is applied to artificial arms also. A "scroll spring and " band for straightening the leg, and to assist the action of " walking with an artificial leg;" this spring is fastened on a barrel, working on a spindle, attached to the part of the leg below the knee, and a strap or band is carried up from it "between " the leg and thigh pieces, and fastened to the front of the " latter."

Third, " the particular construction of the foot, and the appli- " cation of one or more springs at the heel." "The central part " of the foot is made of light wood as far as the fore joint, the " whole is covered with leather; it is attached to the leg piece by " a stout piece of leather." "It is attached to the knee piece by a " pin," which "passes through the sides of the leg piece." At " the heel of the foot is placed a spring or springs;" "if more " than one spring is required, they are placed one within the " other," and they are depressed by a stud "projecting from the " back part of the leg piece;" upon the instep is secured a piece of leather; "the fore part of the foot is made with a joint, and " shaped so as to closely resemble the human foot."

Fourth, "applying to the back of the fore and middle fingers " two spiral springs, extending along the back of the hand, and " imbedded in the material of which it is made; from these " springs two artificial ligaments, made of strips of leather, are " carried through the fingers and fastened to the fore joints."

[Printed, 8*d*. Drawing.]

A.D. 1856, July 28.—N° 1787.

EABORN, EDMUND, and ROBINSON, MATTHEW.—" Certain " improvements in machinery to be used for confectionary pur- " poses." These improvements relate, first, to machinery for grinding sugar, &c.; and, second, to apparatus for "forming and "dividing of confectionery," but which apparatus, it is said, "is "also applicable for forming or shaping medical pills." The matter in a plastic state is fed in between two rollers, formed with semicircular flutes or grooves, lengthways of their peripheries," and thus formed into sticks; the sticks drop down upon two rollers "grooved at right angles to their axes," which "partially "divides and squeezes them" into a kind of oval shape, and passing down from here the materials are "again caught by one "of these two rollers, and a third roller similarly grooved at "right angles to its axes," "which forces or rolls them into a "globular shape," from "whence they drop down on to a delivery "plate," and "from here to a receiver."

[Printed, 10*d*. Drawing.]

A.D. 1856, August 18.—Nº 1922.

RICHARDSON, THOMAS C.—(*Provisional protection only.*)— "The process for the procuring and manufacturing the sulpho-"saccharate of simarubine." Treat the wood "of the simaruba "tree," with dilute sulphuric acid, until the wood is exhausted, then filter and neutralize with any earthy carbonate, so that any excess of acid is neutralized. Evaporate, treat with animal charcoal, alcohol, and crystallize.

[Printed, 4*d*. No Drawings.]

A.D. 1856, September 8.—Nº 2093.

HERRING, FRANCIS MITCHELL.—"Improvements in applying "magnetic action to combs and brushes." These have for their object the "communicating the beneficial effects produced by the "action of the magnetic power or fluid" "to the skin of men "or animals." A horse-shoe magnet is fixed in a chamber in the back of the brush, two iron plates are in contact with the poles of the magnet, and these again are in communication with metallic wires passing through the foundation of the back, and which form the brushing surfaces. The magnetic comb is made "of soft "steel or other appropriate metal," sometimes with a bar magnet fixed in its back. If of soft steel it is hardened and magnetized, "so that one portion of the teeth shall form the north and the "other the south pole;" in another comb the handle forms one pole and the comb another.

[Printed, 6*d*. Drawing.]

A.D. 1856, October 4.—N° 2330.

FARINA, Maria.— (*A communication.*)—" An improved tooth-" powder." This consists in compounding together "cream of " tartar, calcined alum, orris root, calcined magnesia, cochineal, " Peruvian bark." In the full Specification " calcined alum " is not mentioned, and " cinnamon powder and a decoction of " geraneum and rose leaves " are added. These are mixed together in certain proportions and in a certain manner.

[Printed, 4*d*. No Drawings.]

A.D. 1856, October 9.—N° 2371.

JORDAN, Lewis Jacob.—" A medicine for the cure of vene-" real affections." This consists of " sulphate of zinc, nitrate " of potash, tragacanth powder, powdered henbane, tartrate of " potash, bicarbonate of soda, and sugar." These are " com-" bined and used in certain proportions " " according to the " stage or character of the disease."

[Printed, 4*d*. No Drawings.]

A.D. 1856, October 15.—N° 2410.

HEYWOOD, Bennett Johns.—" Improvements in valves for " inflating air-tight hags, cushions, and other similar articles, " and for drawing off liquids." These are as follows :—" Into " the mouth of the bag or other article," " as a baby's sucking " bottle," a " socket is fitted, having a screw on its interior ; in " the centre of the bottom of this socket is a hole, and round " the hole a conical enlargement which fits into a similar depres-" sion in the plug which screws into the socket, and round this " conical depression in the plug a series of holes are bored in an " inclined direction so as to lead into a single hole in the top of " the plug."

[Printed, 6*d*. Drawing.]

A.D. 1856, October 17.—N° 2424.

REED, Jane Elizabeth.—" A mixture or compound for the " cure of asthma, consumption, and other affections of the chest " or lungs." This consists of the decoction, infusion, and admixture of " vinegar, garlic, honey, brandy, carraway seeds, and sweet " fennel seeds." The proportions are given, but they may vary.

[Printed, 4*d*. No Drawings.]

A.D. 1856, October 25.—N° 2510.

SEXTON, JOSEPH.—(*Provisional protection only.*)—"Improve-" ments in the construction of caustic holders, applicable also to " the holding of leads, chalks, and other marking materials." The holder " is formed of two parts, the one to receive the caustic " or marking material, and the other carrying the propeller." " When the holder is adapted for holding caustic," a screw cap is provided "for covering the pointed end of the holder."

[Printed, 4*d*. No Drawings.]

A.D. 1856, November 8.—N° 2634.

JORDAN, LEWIS JACOB.—(*Provisional protection not allowed.*) —" A medicine for the cure of venereal affections and generative " debility, the treisemar." This consists of " sulphate of zinc " nitrate of potash, tragacinth powder, powdered henbane, tartrate " of potash, bicarbonate of soda and sugar."

[Printed, 4*d*. No Drawings.]

A.D. 1856, November 15.—N° 2705.

DAVIES, GEORGE.—(*A communication from Jean Alphonse Pichot, and Pierre Prosper Malapert.*)—" An improved paper suitable for " the filtration of liquids, the dressing of wounds, and for the " manufacture of envelopes, bags, bands, and for other similar " purposes." This consists in " the combination of woven or " felted fabric, paper pulp, and charcoal," for the above purposes. A layer of pulp, of any colour, having been "laid" on the wire cloth, to form one face of the paper, a piece of tissue, either of flax, cotton, silk, or wool, or other woven or felted fabric, is laid thereon, and is then covered with a second layer of pulp, to form the other face of the paper. This second pulp contains " a mixture of powdered vegetable or animal charcoal, added " thereto at the time of fabrication, and previously carefully " washed with acids, in order to render it perfectly pure; that " is, to remove therefrom any foreign matter, more especially " sulphurets."

[Printed, 4*d*. No Drawings.]

A.D. 1856, November 19.—N° 2737.

YEARSLEY, JAMES.—(*Provisional protection only.*)—" An im-" proved method of and instrument for applying artificial tym-

" panums." This consists " in attaching to a pallet of cotton " wool " a piece of some thread " about three inches in length," passing " the free end of the thread through a silver or other tube " of small diameter, until the cotton wool is brought against one " end of the tube, where it is retained by the finger pressing on " the thread, which projects from the other end of the tube; the " cotton wool being then, or having been previously wetted in " tepid water, is introduced at the end of the tube into the ear, " and moved about gently, until the patient finds, by improved " hearing, that it has reached the position intended for it to " occupy. The tube is then carefully withdrawn over the thread " the cotton wool, of course, being left on the proper spot in the " ear. So much of the thread as protrudes is next cut off, or " turned in the ear, when the operation is finished. Where " desired, the tube may be formed with a small hook at one, " end."

[Printed, 4*d*. No Drawings.

A.D. 1856, December 1.—N° 2835.

JONES, John Christian.—(*Provisional protection only.*)— " Improvement of the common pin, wooden leg, and crutch." This consists in using " metal joints, and vulcanized or other " india-rubber, between the metal joints and leather soles."

[Printed, 4*d*. No Drawings.]

A.D. 1856, December 11.—N° 2945.

HUMFREY, Charles.—" The application and use of paraffine " in the manufacture of hair oils, ointments, and plaisters for " medical purposes." For hair oil, " pure paraffine is mixed " with some liquid oil ;" for ointments, " using paraffine instead " of spermacetti, or other fat;" for plaisters, " the paraffine " must be softened by combining it with some balsam possessing " antiseptic qualities."

[Printed, 4*d*. No Drawings.]

A.D. 1856, December 23.—N° 3040.

NEWTON, William Edward.—(*A communication from Jean Hegnaner.*)—(*Provisional protection only.*)—" An improved mode " of manufacturing capsules for containing medicine." " For

" this purpose a number of cores are first cast of some material " such as stearine, spermaceti, wax, or other substance, that will " melt at a low temperature. These fusible cores are afterwards " immersed in the gelatine in a liquid state. By this means the " cores will be covered with a film of gelatine of the desired thick- " ness, and when the gelatine is dry, heat is applied to melt out " the fusible cores, thus leaving the capsules empty, and ready " for use."

[Printed, 4*d*. No Drawings.]

A.D. 1856, December 27.—N° 3076.

WHITE, GEORGE.—(*A communication from Dr. Antelme.*)—" An " improved poultice." This " consists in the employing amadon " (amadou?) in a more or less finely divided state, alone or mixed " with any other suitable substance or substances, and filling " therewith thin bags, one side of which at least is left pervious to " moisture and air, which bags are to be applied as poultices or " cataplasm to the body, the amadon (amadou?) serving chiefly " as a vehicle for the medicamental substances."

[Printed, 4*d*. No Drawings.]

1857.

A.D. 1857, January 1.—N° 2.

REINHARDT, CHARLES CHRISTIAN.—" An improvement in " the manner of fastening metallic backs to truss pads of glass, " porcelain, or other analogous substances." This consists in " constructing the back with a flange extending around its edge, " so as to slip within the rim constituting the edge of the glass " pad."

[Printed, 4*d*. No Drawings.]

A.D. 1857, January 22.—N° 194.

DI TERMINI, GUSTAVE PEREZ.—" Improvements in the con- " struction of artificial hands." These consist in arranging such hands " with fingers which can be brought together so as to nip " *between their* ends anything which the wearer may desire to

“ take hold of ” or enclose. “ The hand is attached to the arm “ or stump by a properly articulated frame, ascending to the “ shoulder, and in order to give motion to the fingers the end of “ the arm or stump is furnished with a six-sided projection, which “ fits into a suitable socket, having on its exterior a series of “ inclines or portions of screw threads, which work with a corresponding nut, so that by giving to the arm or stump a partial “ rotation; this nut is raised or lowered, and this motion is by a “ suitable arrangement of levers communicated to the fingers of “ the hand.”

[Printed, 10*d*. Drawing.]

A.D. 1857, January 30.—N° 271.

THOM, James.—“ Improvements in the construction and mode “ of fixing artificial teeth.” The object is “ to facilitate ” their attachment, and allow of one being readily removed for repairs, &c. “ For this purpose a dovetailed groove is formed on the back “ or inner surface of the tooth, which groove slides upon a “ corresponding dovetailed stem or wire attached to the artificial “ palate. In order to strengthen the tooth, “ the dovetailed “ groove ” may be “ made of thin metal ” with projecting parts imbedded in the material of the tooth. The groove may be affixed to the tooth “ by rivetting, or otherwise.” “ When the tooth is “ slid upon the dovetailed stem, it may be secured in its place “ by any suitable cement, the heating of which will permit the “ withdrawal of the tooth whenever it is necessary.”

[Printed, 6*d*. Drawing.]

A.D. 1857, March 17.—N° 750.

NEWTON, William Edward.—(*A communication.*)—“ Certain “ improvements in artificial legs.” These are “ the use and “ application of the elastic cords, or artificial muscles or tendons “ running from the thigh to the foot, and operating to control “ the motions of the leg and foot.” These elastic cords are “ secured near the back of the thigh piece, close above the knee “ by pegs of wood ” “ passing through loops at their upper ends ” to a brace “ of wood that extends across the thigh piece, and they “ *are attached to* the foot below the ankle joint by being passed “ *through* holes and secured by wedges ” “ driven in from the

" underside of the foot before the cushion or padding of the sole " is put on." "Both of the cords pass under an inverted arc- " formed piece of metal," that "is screwed to the foot in such a " manner as to stand concentric with the pin of the ankle joint " for the purpose of guiding the cords and transmitting their " influence to the foot. One cord passes directly up the back of " the leg to the thigh, and the other cord passes up the front of " the leg and over a pulley" that is fitted within a "slot or mortise " to turn freely on the pin of the knee joint."

Second, a sack "suspended from the top of the hollow socket " of the thigh" to receive the stump of the natural limb. This " sack is secured all round the top edge of the hollow socket of " the thigh," and "is made of such depth as is necessary to " produce an agreeable or painless pressure on all parts of the " stump." "By raising or lowering the sack the limb may be " adjusted to the proper length."

[Printed, 8*d*. Drawing.]

A.D. 1857, March 20.—N° 777.

NINCK, JEAN.—(*Provisional protection only.*)—" Improvements " in placing sets or partial sets of teeth, gums, and palates on " plates." The plates are composed of "gutta percha, india- " rubber, sulphur of zinc, vermilion, protoxide of gold, in such " proportions that the heat renders the amalgamation both hard " and elastic."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 2.—N° 913.

WIELAND, JOHN FREDERICK.—(*Provisional protection only.*)— " Improvements in portable apparatus and materials for cleaning " the teeth." This consists of "a tubular case or holder." "This " case is solid or closed up immoveable at one end, whilst the " other end has a deep head cap screwed upon it. When this " head cap is screwed off it discloses the actual tooth brush " contained therein;" the brush screws "into a tapped hole at " one side of the solid end piece." When two brushes are in one case the short handle of one is opposite to the bristles of the other, the second brush may be curved. The deep head of the case is "in two pieces screwed on to the other with the cavity for " *the powder* between them." Another modification of this apparatus is described. "The tooth powder is composed of "Peruvian bark and orris root, with a portion of quinine."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 8.—N° 982.

TAYLOR, BARNABAS.—(*Provisional protection only.*)—"An "improved arrangement of combined bed and utensil for the use "of invalids." This consists "in the application to a bed for "the use of invalids of a funnel or pan, of earthenware or "other suitable material (resembling in form and uses the "ordinary water-closet pan), which passing downward through "the mattrass or under bedding, terminates above a vessel or "receiver placed in a suitable drawer or box beneath the framing "of the bed. When not required the top of the funnel may be "covered by a suitable lid and cover."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 8.—N° 983.

LARNAUDÈS, JEAN FRANCOIS VICTOR.—"For the disinfec- "tion and deoderisation of animal and vegetable substances." Among various applications it is stated that "it is singularly use- "ful in disinfecting and purifying the air in hospitals, sick "rooms," &c. This liquid is designated "antimephitic water," and is produced "by the admixture in certain proportions of the "sulphates of zinc and copper with water."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 13.—N° 1035.

MAURICE, JOSEPH.—"Certain improvements in the fastenings, "fixings, and attachments used for supporting or securing arti- "ficial teeth in the mouth." These consists in applying "a "covering of vulcanized or permanently elasticated india-rubber," whether "in the form of tubes to clasps, bands, and such like "articles, or as strips, ribbons, or threads wound thereupon for "the purpose of covering the same, or whether it be applied in "sheets."—The non-vulcanized india-rubber is "applied to the "surfaces of metal plates, bands, or other parts of artificial mas- "ticating apparatus, and afterwards subjected to treatment by "the wet or dry process for the purpose of vulcanizing them."

[Printed, 6*d*. Drawing.]

A.D. 1857, April 14.—N° 1049.

WICKS, PETER, and GHISLIN, THOMAS GOULSTON.—"Superseding the use of bristles, cocoa fibres, flax, hemp, whale-"bone, &c., to be styled and called an invention for adapting "and applying the fibrous plants of South Africa to the pur-"poses of manufacture." A vast number of plants are named, among the first of which are the "juncus sereta, juncus trista, "aloe aborea, sanseviacæ, malvacæ, Watsonia latifolia," &c. &c. These are treated as in obtaining fibrous substances, in doing which gum is extracted, which gum, it is stated, is applied "to "medicinal purposes, its properties being astringent."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 14.—N° 1052.

HARRISON, THOMAS.—"New or improved machinery for the "manufacture of wooden pill boxes, match boxes, and other "such articles." This consists as follows:—"A pair of hollow "rolls or cylinders are situated parallel in a horizontal plane." The "rolls are open at both ends, and have a rapid rotatory "motion given to them. A piece of wood, either rough or "dressed, is placed in each of the hollow rolls or cylinders, the "end of each piece of wood protruding from the said cylinders. "Pistons or plungers introduced at the other end of each "cylinder urge the pieces of wood forward at proper intervals. A "cutting tool, advancing against the rotating wood, of which a "lid is to be made, bores it out of the proper size; the said tool "retires, and a holder advances upon the lid; a cutting tool "approaches laterally, and cuts off and shapes the outside of the "lid. The holder carries the lid opposite to the other hollow "cylinder containing the wood, of which the box is to be made, "and which said box has been scooped out, as described with "respect to the lid. During the carrying of the lid the holder is "turned half round upon its axis, so as to present the lid with "its under side towards the box. The said lid is placed upon "the box, and a cutting tool advancing laterally turns the box "and cuts it off. The holder carries the lid and box down to a "chuck, where they are finished, and pass to a counting machine "at the lower part of the machinery, by which the number of "boxes is registered. The bearings of the moving parts are, "*where necessary*, made hollow, so that, by the circulation of

" water through them they may be kept cool. The motions of " the several parts are communicated from a main shaft by means " of cambs, screws, and other mechanical appliances."

[Printed, 8*d*. Drawing.]

A.D. 1857, April 22.—N° 1132.

KENDALL, William.—(*Provisional protection only.*)—" Improvements in the manufacture of boxes and similar articles, " and in the machinery or apparatus to be employed therein." These are in " the construction and arrangement of machinery or " apparatus for making " pill-boxes, &c. " The machine consists " of an ordinary lathe-bed carrying two fixed headstocks, in " which revolves a hollow spindle fluted inside, and carrying a " fast and loose driving pulley." The wood, &c., of the desired diameter " is placed at one end inside the hollow spindle and is " carried round therewith." " The end of the wood protrudes " beyond the headstock," " according to the desired height of the " box, and is turned or shaped outside by means of suitable " cutters fixed on a slide-rest worked to and fro " by a hand " lever. The box is hollowed by means of a chuck fitted with " three different cutters, and carried in the end of a slide." The box when " shaped and hollowed is cut off " " by means of " another cutter fitted to the opposite end of the transverse " sliding rest." The wood for another box is now pushed forward " by means of a travelling headstock, which carries a centre pin, bearing against the back end of the wood."

[Printed, 4*d*. No Drawings.]

A.D. 1857, April 25.—N° 1173.

PRYNN, Charles Thomas Robert.—(*Provisional protection only.*)—" An improved apparatus to be used for totally or partially benumbing any part of the human frame previous to " a surgical operation, for the purpose of performing the said " operation without pain." Within a wooden or other case and at a short distance from the bottom thereof, two small metal pump barrels are fixed, each fitted with a solid plunger, working water-tight through a gland or stuffing-box of the ordinary kind. These two barrels are connected together and terminate in one common outlet, to which an elastic tube or tubes is or are connected, and to the upper ends of these said tubes thin tubes of metal and sponge are affixed and connected thereto. The before-mentioned plungers are respectively connected by rods to a two-throw crank shaft, upon one end of which a winch-handle is fixed for imparting rotatory motion thereto; the barrels of the pumps are also provided with suitable valves. One half of the case of the apparatus contains the freezing mixture to be used, and has a rotatory agitator placed therein, which receives motion from a winch-handle placed on the axis or spindle thereof.

[Printed, 4*d*. No Drawings.]

A.D. 1857, May 1.—N° 1232.

BLANDY, Alfred A.—"An improved mode of moulding and " casting the plates or bases of artificial teeth." This consists as follows:—First, "moulding the plates or bases of artificial teeth " in such a manner as to obtain an accurate fit to the gums and a " correct articulation of the teeth," as follows:—"An impression " of the mouth in wax is first obtained," "from which a plaster " cast is taken;" upon this cast "a pattern plate made of rolled " wax $\frac{1}{30}$ to $\frac{1}{50}$ of an inch thick, and lined on the side next the " cast with metallic foil, is pressed;" "after which, a rim of wax " of about $\frac{1}{4}$ of an inch wide is placed upon the alveolar ridge of " the same." The process is repeated for the lower jaw, and they " are fitted in the mouth. The double cast, technically termed " the articulator, is then formed upon them preparatory to adjust" ment of the teeth upon the wax rim," "which adjustment will " require the removal more or less completely of said rims." The teeth having been arranged, and all superfluous wax removed, " leaving only so much as is designed to be replaced by metal in " order to secure a plate of proper thickness," "the pattern plate " is placed upon the original cast," "and the other half of the " matrix made by pouring the composition over it." "When " hardened the two parts of the matrix are separated and the foil " and wax carefully removed." An entrance is cut "to give free " access to the metal, with suitable vents;" "the two parts of " the matrix are closed and secured firmly together," and heated from 250 to 350 F., which, "by gradually heating the teeth, " renders it impossible for the metal to fracture them." "The " matrix thus heated is then ready to have the metal intended to " form the base or plate poured into it."

Second, "forming artificial teeth" "so as to adapt them to the " *process of casting*." "The teeth have side projections which

" are perfectly encased by the metal;" or they are formed with " a dovetailed groove, &c., round which the metal flows, and other modifications of the same.

Third, a matrix composed of plaster of Paris and feldspar, "in " nearly equal proportions."

Fourth, for "casting the plates," an alloy "which practically " will not shrink or expand on solidifying or cooling." This alloy is composed of tin, bismuth, antimony, and silver, and to these might be added cadmium. Or, an alloy is used composed of tin, antimony, and silver, all in certain proportions.

[Printed, 8*d*. Drawing.]

A.D. 1857, May 8.—N° 1301.

WOODWARD, **Frederick Grindlay Howard**.—(*Provisional protection only.*)—" Medicine for the cure of dropsy," as follows: " elicompane root, stick liquorice pulled, anniseeds, coriander " seeds, guracum (guaiacum?) jallop root, Malapa raisins," in certain proportions.

[Printed, 4*d*. No Drawings.]

A.D. 1857, May 8.—N° 1304.

LIPKAU, **Théodore**. — "An improved anti-syphilitic com- " pound." This consists in "forming a compound either as a " soap or powder," composed of bichloride of mercury, hydro- " chlorate of ammonia," triturate in a stone mortar." Tincture " of thuja (occident) a sufficient quantity." Tannin. "Agitate " the solution in another mortar, and afterwards mix with it " chloride of lime, soda, soap, tincture of thuja, oil of cloves," " make into a soap." These are mixed in given proportions. " One ounce of the soap is dissolved in one pound of water, and " the solution is employed to wash and inject the urethra or " vagina within two hours after contact." "This soap may be " reduced to powder if required."

[Printed, 4*d*. No Drawings.]

A.D. 1857, June 10.—N° 1630.

DUNN, **Arthur**.—" An improvement in preparing and packing " tooth powder." This consists in subjecting "tooth powder to " pressure in moulds, so as the same may be moulded into form,

" and coating or covering the same with tin foil, or other suitable " covering, which will admit of being readily removed as the " moulded tooth powder is removed by being rubbed on a tooth " brush." Powder, "containing charcoal and others," require to be moistened; this is effected by adding a small quantity of sweet " oil or honey, or other material."

[Printed, 10d. Drawing.]

A.D. 1857, July 7.—N° 1884.

BÉRARD, Peter Hippolyte Gustave.—" Improvements in " manufacturing and applying concentrated collodion." This consists either " by dissolving the azotic cotton in a warm state, " or by concentrating the solution, in which case sixty per cent. " at least of the ether can be recovered." " The modus operandi " consists in dissolving the azotic cotton with the assistance of " heat in a common distilling apparatus," " heated by means of " a water bath, and provided with a worm, as usual, which worm " is cooled by cold water."

[Printed, 4d. No Drawings.]

A.D. 1857, July 28.—N° 2056.

JACKSON, Robert.—" Improvements in protecting certain " parts of the body from disfigurement in cutaneous diseases." Under this head the following are the claims. First, " the system " or mode of treating variola, or small-pox, or other cutaneous " diseases of a like character, in which the affected parts are " protected from the influence of the atmosphere by means of " hoods or other protective coverings."

Second, " the systems or mode of arranging and making hoods " or other coverings for the purpose of protecting the faces, hands, " or other usually exposed parts of persons suffering from small- " pox, or other severe cutaneous diseases."

Third, " the system or mode of preventing the injurious effects " of air and light upon the face, hands, or other exposed parts of " the human body during the continuance of eruptive diseases " by covering or enclosing such parts with hoods, coverings, or " other protective envelopes."

The hood covers the whole head, face, and neck, an elastic tube is made to fit closely round the nostrils and mouth, pieces of glass or mica, &c., form the eyes, &c.

[Printed, 4d. No Drawings.]

A.D. 1857, July 28.—N° 2060.

BOBŒUF, Pierre Alexis Francisse.—" Improvements in " preserving and otherwise treating animal and vegetable sub- " stances, and in the purification of oils employed therein, and " which may be used for other purposes." The improvements which relate to this subject are in "the embalming of bodies," and in "the purification of all crowded habitations and places, " such as hospitals," &c., and in carrying out these improvements " vegetable and mineral oils containing saponifiable acid " oils capable of forming soluble salts in water, and of acids " derived by substitution obtained from saponifiable acids con- " tained in essential, vegetable, or mineral oils" are employed. " The saponifiable acid oils" are derived "from the distillation of " mineral and vegetable substances," such as " wood, peat, &c.," " coal, different kinds of schist, anthracite, &c." Is is stated that " anatomical specimens may be prepared by placing at the " bottom of a decanter or other such vessel about $\frac{2}{5}$ of an inch " deep of benzine, suspending the specimen above the benzine in " the decanter, and closing the mouth hermetically."

" To obtain an aqueous solution of essential oil, either of " phénic acid, creosote, or oils formed of these, it is sufficient to " add one per cent. of the oil to any quantity of water and agitate " for about ten minutes." This solution " preserves meat very " well, provided that it be renewed once or twice." " The aqueous " solution of commercial phenic acid, for instance, may be em- " ployed with advantage in the purification of the air of crowded " apartments."

" To obtain an alkaline salt adapted for the preservation of " animal substances, the mixed mass of essential oils obtained " from the distillation of one of the substances alluded to above " must be agitated for half an hour with some caustic alkali." These alkaline salts it is stated appearing to be formed of acids " more analogous to phénic acid and creosote than to any other " substance," are designated phénates, and "these saponifiable " acid oils, commercial phenic acid." This acid is obtained by adding to the alkaline solution of the salt an acid, if a mineral " acid, say sulphuric, the phenic acid floats on the top. In some cases the "alkaline phénate" is used, and in others the phenic *acid; in the "embalming* of bodies," either the body is immersed *in their solution,* or "the method of injection by the carotide" is pursued. "By daily sprinkling hospitals," &c., "with solution "of phénate of soda of one degree, they may be kept clear of "flies, bugs, &c."

[Printed, 6*d*. No Drawings.]

A.D. 1857, August 12.—N° 2154.

CLARKE, WILLIAM ALEXANDER.—"Improvements in the "construction of, and mode of applying hot air and vapour "baths." These are, first, the bath, in preference of zinc, the patient reclines on a frame placed in the bottom of the bath, the head extends beyond the bath, and is supported by a board rest. A groove or channel is made all round the upper edge of the bath, a zinc or other cover of a domed or other shape is placed on the bath with its lower edges in the groove or channel, in which is water so as to form a steam-tight joint, except where the head of the patient extends beyond the cover, but this part is made as steam tight as possible by blankets or cloths, &c. A serpentine perforated pipe on the bottom of the bath admits steam, and a short distance above this pipe and beneath the frame or board on which the patient lies is placed a perforated sheet of zinc, which causes a more perfect diffusion of the vapour, and prevents any rush of hot vapour to the body. The same bath may be useful for submitting the arms or legs to the action of vapour or hot air, but a much smaller sized vessel may be used. "In applying the "vapour or hot air bath to limbs, I provide the holes or apertures through which the limbs are introduced to the bath with "strong vulcanized india-rubber or other ligatures with which I "surround the limb for the purpose of stopping the circulation "of the blood while the limb is in the bath." In this case heat of 200° F. may be employed, "not only without danger, but "with great advantage to the patient."

Second, the employment and application of legatures as above.

[Printed, 10*d*. Drawing.]

A.D. 1857, August 17.—N° 2184.

POZNANSKI, FRANÇOIS XAVIER.—(*Provisional protection only.*)—"An improvement in instruments for ascertaining and "indicating the state of the pulse, which improvement is also "applicable to other instruments in which fluids are required to "circulate or work in tubes of small bore." This instrument, intended to be named a "sphygmometer," "consists of a capillary

" tube, provided at its lower extremity with a chamber filled " with mercury, and closed by a flexible diaphragm;" "a fine " metal wire is introduced into the tube," to prevent or overcome the capillary attraction of the mercury in the tube. The tube is bent, and has a scale upon it, "whereby the strength of the " pulse will be seen, as the mercury at every beat or pulsation is " thereby driven up the tube. The frequency or number of beats " within a given time may be ascertained by means of a small " sand glass which is adapted to the instrument."

[Printed, 4*d*. No Drawings.]

A.D. 1857, September 8.—N° 2345.

HOWARD, WILLIAM.—(*Provisional protection only.*)—"Im- " proved apparatus for supplying air medicated or pure to persons " in confined apartments, and other places requiring ventilation." These are, in reference to this subject, using and applying "an " arrangement of pipes or tubes communicating with the open " air, and fixed in any convenient manner along the roof or other " suitable part." These supply pipes or mains have any required number "of flexible branch pipes, to the ends of which are " adapted mouth pieces furnished with clack valves, one of which " opens inwards to admit air from the main, and the other valve " opens outwards to allow the vitiated air expired by the wearer " to escape." "In hospitals two or more sets of tubes with their " branch pipes may be employed," so that with either pure air from outside or warm or medicated air may be supplied. They should be so arranged that the mouthpieces may be applied to the patient's respiratory organs while he is lying in bed. The same may be done in ships' cabins. In mines a pure air main with branch pipes and mouthpieces is arranged so that the men can obtain immediate access to them when desired, and when foul air or choke damp manifests itself the men may instantly resort to the breathing tubes, and there remain until the foul air is cleared out. In some cases the air is forced from the external atmosphere into the pipes by means of pumps, &c., medicated air is forced into rooms; and also, while an exit is provided for the vitiated air. An apparatus to be used by persons working in sewers, &c. consists of "a double-valve mouthpiece covering the nose and " mouth, attached to one end of any convenient length of flexible " pipe or tube, the other end of which should remain open."

[Printed, 4*d*. No Drawings.]

A.D. 1857, September 12.—N° 2374.

WATSON, Charles.—"An improved apparatus for curing "certain bodily complaints." This consists of a ring "to be "applied to or worn on the penis." This ring has "a hinged "joint" and has "a screw or other fastening." Through the underside of this ring passes a screwed spindle, fitted at one end with a milled head for turning the same, and at the opposite or inner end with a pad or cushion which is free to revolve. The object being "to influence the functions of the seminal vessels "and spermatic cord by a gentle and equable pressure, and by "so doing contract the relaxed parts in order to produce the "beneficial results desired."

[Printed, 6d. Drawing.]

A.D. 1857, September 17.—N° 2411.

PULVERMACHER, Isac Louis.—"Improvements in apparatus for creating electric currents chiefly for medical purposes." These are, first, "an improved arrangement of electro magnetic "apparatus for producing induced currents." "Inside the coil "of copper wire" numerous small iron wires are carried down and bent "up back again to the top of the apparatus, one half "over the outside of the copper wire" on each side, and "then "united to a bar or plate of soft iron, the outer ends of which "are connected to coiled springs outside the apparatus in order "that to-and-fro motion of the bar plate may be obtained by the "interruption of the circuit."

Second, producing "a constant and energetic current in batteries without the employment of any acid," by the use of a positive metal, for instance, zinc, and carbon or other negative body, and "a solution of bichromate of potass, bisulphate of "potass, and sea salt."

Third, "for portable flexible batteries." "Copper, silver, and "zinc wires" are wound alternately round a perforated strip or band of gutta percha, &c., and united "into one battery," or "positive and negative metal wires are woven with a non-metallic "or textile warp; or a textile material is printed with an adhesive "composition and the printed parts covered with metal leaf or "foil, or metal in filings, or powder; a corresponding form is "similarly printed and covered with metal" electrically positive or negative "to the first, or a plate of positive metal, say zinc

" has pieces pressed out of it, and into these places pieces of " a negative metal, say copper, are inserted with an insulating " material between them." "These batteries may be excited by " being dipped in an exciting liquid and then withdrawn, or " by being supplied by capillary attraction through some porous " body."

Fourth, "for making and breaking electric circuits," "an interruptor," consisting of "a cup or shell of caoutchouc," in which are sunk concentric rings of metal; a metal ball by "rolling in " the interior of the cup," "will be caused to touch momentarily two of the rings at once," and "thus make and break the " circuit."

[Printed, 1*s.* 4*d.* Drawings.]

A.D. 1857, October 5.—N° 2554.

REGNAULD, ATHANASE VICTOR CONSTANT.—"A universal " preservative medicine." This consists as follows:—fatty matters and "caseum" are removed from "pure mammiferous milk" " by the ordinary means," and "the liquid part as usual" is purified, and to it is added "rectified hydrated ether;" this is allowed to stand. White sugar candy is dissolved in distilled orange-flower water and filtered, and the solution added "to " the ether mixture." Certain proportions are given.

[Printed, 4*d.* No Drawings.]

A.D. 1857, October 10.—N° 2603.

EDWARDS, HENRY.—"An improved vessel or feeder for administering food and medicines." This consists of a vessel "in " the form of a cornucopia or an inverted cone," "with an orifice " at the upper end for regulating the admission of air to the " vessel and the outflow of the liquid, and with a narrow curved " outlet at the lower part or end," to which may be fitted or not " an artificial teat or other like suitable article, a stop-cock nozzle " or spout." The thumb or finger on the aperture may regulate the flow of the liquid, or instead of the thumb or finger "a " ventilating stopper of the kind secured by No. 330, A.D. 1858, " may be advantageously used."

[Printed, 8*d.* Drawing.]

A.D. 1857, October 29.—N° 2746.

GOURLEY, Daniel de la Cherois.—(*Provisional protection only.*)—"Improvements in ambulance carriages." These are, "each carriage is made of such length as to contain on its bottom "two stretchers side by side and longitudinally of the body of "the carriage." The stretchers have each on their under side "four rollers, or the rollers are applied to the bottom of the carriage. Each stretcher has handles and folding legs, a folding seat on the top at each side, and the front of the roof has two seats, altogether holding ten persons, &c.

[Printed, 4*d.* No Drawings.]

A.D. 1857 December 3.—N° 3003.

HENWOOD, Charles.—"An improved arrangement of galvanic battery suitable for medical purposes." This consists as follows:—a copper plate is bent at the centre and folded "one "half down over the other half;" "small portions are cut away "from the fold or part" and a zinc plate covered with linen, &c. is placed between the folded copper plate. The zinc plate, one-half the breadth of the copper plate, has two lugs which project beyond the parts cut away from the fold in the copper. The opposite corners to the lugs of the zinc plate are cut away, and the corners of the copper plate are doubled over them. Rings through "holes in the zinc lugs and copper corners unite every "pair of plates." "A number of pairs of plates connected "together are fastened to a strap to form a belt for personal "wear;" a linen case buttons "over the plates to keep them "from contact with the body, when desired."

[Printed, 6*d.* Drawing.]

A.D. 1857, December 11.—N° 3058.

DENNE, William.—"Improvements in apparatus used for "lifting patients off beds and other surfaces used for reclining "upon." These are as follows:—"A frame is arranged some-"what larger than the bed or surface," which frame "is sup-"ported by connecting links or parallel bars, so that it can be "readily moved off the bed or surface." The frame may be arranged to move in any direction. It is provided with straps, with which to raise the patient. "The frame may be made in "parts, and suitably formed to admit of one or more parts "assuming an inclined position."

[Printed, 6*d*. Drawing.]

A.D. 1857, December 14.—N° 3073.

PARKER, JOSEPH.—"Certain improvements in the construction "of bedsteads." These relate "more particularly to bedsteads "for the use of invalids," and are said to be, first, "constructing "and operating the moveable parts," claiming "particularly of "the moveable head board," "with the moveable frame," and "also the attachment of the bolster to the head (board), so as to "prevent it from slipping behind the patient."

Second, "the use and application" of the moveable footboard, "and the mode of constructing and operating the same." In place of the laths "at that part of the bedstead which supports "the head and upper part of the body," a framing is adapted, "moveable, by turning a winch or handle." The head board, attached to bent levers, is moved by a similar arrangement. The foot board can be "moved up to the person reclining on the bed, "and may be used either as a flat or horizontal table, on which "food or other articles may be placed when required;" "or it "may be inclined, and made to serve as a reading or writing "desk."

[Printed, 10*d*. Drawing.]

A.D. 1857, December 24.—N° 3164.

BURLEIGH, BENJAMIN. — "Certain improvements in the "manufacture of vessels, plates, or utensils used for domestic, "sanitary, electric, and manufacturing purposes." These are as follows:—Taking "carbonaceous matter, such as coke, animal "or vegetable charcoal, boghead ash, gas carbon, soot, lamp "black, or other suitable material, each by itself, or mixed and "rendered plastic by means of moist bituminous, resinous, "gummy, oleaginous, saccharine, glutinous, or other suitable "cementing medium," and forcing "the said materials into "moulds, suitable for the objects to be constructed, by stamping

" or beating with suitable tools, by means of machine or other " power to the required degree of consistency or solidity, after " which the objects are baked or burned in closed vessels."

[Printed, 4*d*. No Drawings.]

A.D. 1857, December 30.—N° 3189.

MORRISON, James Darsie. — "Improvements in effecting " surgical and medical operations by the agency of artificially " induced anæsthesia." These relate "to the diminution or " deprivation of the sense of feeling in the parts of animal " bodies, for the purpose of effecting various surgical and medical " operations." "In carrying out this application" "the operator " produces a supply of cooled liquid in any convenient and well " known way," and whilst this is being applied, the parts immediately surrounding "are subjected to the action of a current of " cold air, the low temperature of which is produced by the " removal of the latent heat in the air by the well-known system " or principle of alternated compression, artificial cooling and " expansion." The cold from the two sources referred to may be applied "either by two separate and mechanically distinct " channels, or the ærial flow may be brought through a tube " surrounding the tube which conveys the cold from the centrally " applied cooled surface. And in order still further to secure " the proper anæsthetical condition, an electric current is or may " be brought from a suitable battery and applied by a wire to " the parts under treatment; and this application may either " be made alone or in conjunction with the artificially produced " anæsthesia due to congelation. In all these three applica" tions constant and graduated currents are used." For carrying out the above, several different arrangements of apparatus are described.

[Printed, 8*d*. Drawing.]

1858.

A.D. 1858, January 1.—N° 7.

JOHNSON, John Henry. — (*A communication from Louis Charles Riatot.*) — " Improvements in penholders, pencil cases, " and other articles sliding in cases of a like nature," among which articles toothpicks are named. Supposing these improvements are to be applied to an ever pointed pencil, " that portion " of the holder which carries the leads, and slides inside the " case, is connected by means of an internal india-rubber or " helical spring with the top end of the holder;" " a stud or " button, attached to one side of the slide," " draws out the lead " ready for use, and when it is drawn out it is retained in that " position by means of a spring catch inside the case, which is " released by simply pressing it with the nail, whereupon the " internal spring instantly draws back the pencil inside the " case."

[Printed, 6*d*. Drawing.]

A.D. 1858, January 7.—N° 23.

LAVATER, Manuel Leopold Jonas.—The title in the Provisional Specification is " The application of the principle of " exhausting air, as used in plate-holders, breast-pumps, for " pegs;" and in the full Specification it is, "The application of " the principle of exhausting air (pneumatics), as used in plate- " holders, breast-pumps, cuppings, for instruments to be called " self-adhering pegs, or pneumatic brackets, or pneumatic instru- " ments or utensils." The manufacture is described as follows: —" On the edge of a wooden cup is fixed an india-rubber disk (as " used in plate holders), and on the top of the said cup is placed " a rotary cylinder, the inside of which is a female screw or knot. " The cylinder and cup are traversed through the centre by a " square stem, the end of which is a screw working in the knot " of the cylinder; to the other end of the stem is attached a flat " button, which is fastened to the disk."

The method of using the above is as follows: — "The disk " should be placed on any solid surface, when, by turning the " cylinder, it acts on the stem which draws the india-rubber

" disk, and creates a vacuum, greater or less, according to the " modulation of the screw, which, when done, the utensil will " remain secure."

Other known methods of creating a vacuum, it is stated, are used, but preference is given to the above mode, and which mode is to be applied "to breast pumps, cuppings," &c.

[Printed, 4*d*. No Drawings.]

A.D. 1858, January 30.—Nº 172.

NEWLING, John.—"An improved truss for hernia." This consists of "a hinged pad attached to a body spring, and of a " lever spring which is attached to the lower end of the pad, and " passing upwards to the top is pressed by the body spring, " thereby pressing with double power the lower end of the pad, " while the hinge allows freedom for every movement of the " body, and by these means the pad is kept in close application " to the rupture, and the use of understraps is avoided."

[Printed, 8*d*. Drawing.]

A.D. 1858, February 15.—Nº 284.

MOLINARI, Pierre. —"An improved composition to be used " externally for preventing sea-sickness, and illness arising from " similar causes." This consists as follows: —" Rue, thyme, " powdered mint, rosemary, absinth (wormwood), turmeric, green " husks of walnuts, rocou (annotto), potash, and poppy head," all in certain proportions, are soaked in a certain amount of " vinegar for 12 hours; the whole is boiled for half an hour, " after which it is strained through fine linen." This is applied by means of paper, &c. to the pit of the stomach.

[Printed, 4*d*. No Drawings.]

A.D. 1858, February 20.—Nº 330.

EDWARDS, Henry.—"Improvements in stoppers for feeding " bottles and other vessels." These are, making stoppers wit a passage through them, which is conical or larger towards the interior of the vessel. In the passage is applied a tightly fitting conical plug, with a stem passing to the exterior of the stopper, which, when pressed, opens a passage for " air to flow into " the vessel, and also, in some vessels, to admit of the fluid

" contained in the vessel to flow out through the stopper."
" The plug is constantly pressed in an outward direction by a
" vulcanized india-rubber spring."

[Printed, 6*d*. Drawing.]

A.D. 1858, February 27.—N° 388.

KNOTT, James.—" An improved feeding bottle." This consists, first, " in the shape and configuration of a bottle or feeder, with " two flat sides and taper neck, and the inlet hole at the upper " sides, so that when the vessel is filled and laid aside, no portion " of its contents can run out." To the taper end an elastic teat is attached, which may have a strainer, " to prevent the smallest " particle of hard food being conveyed to the stomach."

Second. " A stopper valve, for regulating the supply of air for " the flow of the liquid by suction." This is a stopper for the inlet hole at the upper side, through which stopper is a hole with a valve for the admission of air, " when suction is applied to the " teat or nipple;" the valve is made of elastic material.

[Printed, 6*d*. Drawing.]

A.D. 1858, March 9.—N° 477.

HARRINGTON, George Fellous.—" Improvements in the " manufacture of artificial teeth, and in the beds and palates for " teeth." These are, first, making flat mineral teeth with an angular notch, " which notch, fitting into a metal base, prevents " its slipping off, and takes the whole of the force exerted on the " point of the tooth towards its base, by which means it is only " necessary to have one metal pin or blade made in the tooth," rivetted to the palate or bed.

Second. Making the beds or palates for artificial teeth of cast aluminium.

Third. Forming moulds for casting the beds and palates. A mould of the part is taken in the usual way, and a model is obtained therefrom in plaster of Paris and sand and water, and to this the mineral teeth are adjusted, when " form a beeswax " pattern for the metal bed or palate on it, and attach the " mineral teeth to it in their proper place;" cones of wax are attached " to the bed or palate, so as to form patterns for holes to " pour the melted metal in," and the escape of air. The teeth are removed from the wax pattern, and the model, with the wax pattern attached, are placed in an iron box, open at the top, so that the large parts of the wax cones may be uppermost, when pour a mixture of plaster of Paris with sand and water into the box, so as to embed the whole. When set, heat the whole sufficiently to melt out the wax, and while hot pour the melted metal into the cavity produced by burning out the wax.

[Printed, 4*d*. No Drawings.]

A.D. 1858, March 12.—N° 506.

NEWTON, ALFRED VINCENT.—(*A communication.*)—"A new " combination of instruments for extracting teeth." The object is " to mitigate the severity of the operation of extracting teeth, " and it consists in combining with a common dental forceps a " magneto-electric or an electro-magnetic machine, or its equivalent." " A wire from one pole of the machine forms a metallic " connection with the part of the forceps that grasps the tooth, " while the other pole is brought into connection with the patient's " hand by a second wire. The handles of the forceps, which are " held by the operator, are better to be insulated by being covered " with gutta percha or similar non-conducting substance."

[Printed, 6*d*. Drawing.]

A.D. 1858, March 12.—N° 507. (* *)

CORBELLI, LUIGI FERRARI.—(*Partly a communication from Vincent Riatti.*)—" An improved process for extracting aluminium " from its compounds, and obtaining at the same time proto- " chloride of mercury." An electro-depositing solution is made that contains a salt of alumina and either chloride of calcium or chloride of sodium. This liquid is electrolysed with a weak electric current and with a positive pole of mercury and a negative pole of zinc. " A galvanic action being now set up, the salts " of alumina will be decomposed, and the aluminium will be " deposited upon the zinc plate, either in the form of a blackish " powder or in a thin compact sheet. During this operation the " chlorine will be set at liberty, and having a great affinity for " mercury, it will combine with that metal, and form therewith " protochloride of mercury (commonly known in commerce as " calomel), which will be found deposited on the surface of the " mercury at the bottom of the vessel."

[Printed, 4*d*. No Drawings.]

A.D. 1858, April 6.—N° 738.

ROSE, John.—(*A communication.*)—(*Provisional protection only.*) —" Apparatus for applying heat, cold, moisture, fumes, vapors, " and other agents in medicine and surgery." These consist " of " a heater or cooler for heating and cooling air or other aeriform " body, or a generator for generating steam or other vapor or " fumes, a bellows or other forcing or suction apparatus, and " pipes connecting the heater, cooler, or generator, with a proper " mouthpiece or mask, to be directed or applied to any part of " the body."

In carrying out the above, several forms of apparatus are described.

[Printed, *4d.* No Drawings.]

A.D. 1858, April 7.—N° 746.

WORTHY, Richard.—(*Provisional protection only.*)—" An ap- " paratus for preparing medical fomentations." The object is to apply steam, and " consists of an apparatus in which is arranged " a boiler (heated by a spirit lamp), and also a steam chamber " communicating with the former by pipes. The steam chamber " is constructed with a double casing, the interior one being " perforated with small holes for the admission and equal distri- " bution of steam throughout the chamber."

[Printed, *4d.* No Drawings.]

A.D. 1858, April 13.—N° 798.

YARDIN, Peter Allembert.—(*Provisional protection only.*)— " Improvements in trusses." These are, the straps or belts consist of strong leather in place of metal springs, the thigh straps of thinner leather. The pads or cushions may consist of two or more spiral springs or a bag of vulcanized india-rubber inflated with air, or for some applications common pads. " The " moveable straps are variously attached to buttons or metal " studs to enter holes pierced in the straps, or like means for " easy attachment or removal. In the construction of double " paupes straps, the cushions are elongated, stuffed with wool, " and covered with wash leather; and in purse straps I apply " two small cross strips and two lesser back straps, attaching " the whole to a strong covered main leather strap. In other

" straps or belly bands the main band has in its front surface an " external strap, adjustable by a pierced strap and buckle or " hook at one end, and a lower strap fastened at its centre to " the main strap, and terminates in two pierced adjustable " straps."

[Printed, 4*d*. No Drawings.]

A.D. 1858, April 17.—N° 841.

MENNONS, MARC ANTOINE FRANÇOIS.—(*A communication.*) —" A certain medical compound for the treatment of epilepsy." This is composed of "cinnabar, misletoe, castoreum, succinum, " essence of marjoram, Peruvian balsam," and these are made into pills by means of syrup of piony. The proportions of each of the ingredients are given, but, "these proportions may be varied " according to the age, temperament, and general constitution " of the patient."

" Previous to the employment of the above compound, during " three months the patient should drink about one pint per day" of a preparation of senna, manna, sarsaparilla, marsh mallow root, and water, all in certain proportions. " A foot bath should be " taken morning and evening. At the end of these three months " the following preparation should be employed :"—senna, jalap, light white wine, distilled together in certain proportions, and the distillate mixed with syrup, and a wine glass taken night and morning, &c. No claim is made to the last preparations.

[Printed, 4*d*. No Drawings.]

A.D. 1858, April 27.—N° 936.

KEILLER, WEDDERSPOON.—" Improvements in apparatus for " cutting, reducing, or dividing vegetable, animal, and other substances." Among the several appliances named are " sliceing " and reducing drugs, and for other analogous operations." These improvements relate to certain mechanical arrangements, which may be described as follows :—A pair of steel rollers, made with deep grooves or indentations, are arranged one above the other in such manner that " the sharp angular edges of the annular projections divide the material as it is passed between them." " The rollers have fast to each of their spindles a toothed wheel, " one of which is put in motion by means of a handle secured to " the end of the spindle." Serrated pieces of metal, like combs,

" are fixed across the apparatus, just above and below the line " where the cutting action takes place" to clear the grooves of material. " The severed material is carried away from the cutting " rollers by a pair of plain rollers, which are arranged parallel to " the first pair. These rollers are driven by an intermediate wheel " which is in gear with one of the toothed wheels on the cutting " rollers." " If the material or substance is required to be cut " transversely, a cutter is fixed longitudinally in one of the drawing rollers."

[Printed, 4*d*. No Drawings.]

A.D. 1858, May 7.—N° 1024.

FIELD, JAMES JOHN.—" Improvements in evaporating or in " extracting moisture from liquids, and from substances in a " liquid state, and in apparatus to be employed therein." Among other applications named, " the process is particularly applicable " to the obtaining of pharmaceutical extracts." It is named " the normal process, on account of its capability of furnishing " medicinal and other products in an unchanged or normal state." The improvements consist " in the employment for the purpose " of evaporation of gases or vapours of such nature as to prevent " the oxidation of the matters acted upon;" carbonic acid gas is the example given.

" The apparatus consists of a pipe leading from the chemical or " mechanical drying chamber into a reservoir, having one of its " sides perforated with numerous small holes or narrow slits, " through which perforations the dried gases or vapours pass into " a chamber wherein the liquid or other substance to be operated " upon (divided into numerous small streams, or sheets, or jets, " by perforated spreaders or other like mechanical agents) is presented to their action; the gases or vapours then pass through " another series of perforations into a chemical drying chamber, " containing chloride of calcium or other chemical agent, as aforesaid, or into a mechanical drying chamber or apparatus, from " whence they are conducted to be used over again. After the " fluids fall in the liquid chamber," they are raised " by pump or " otherwise, to be again divided into small streams, as beforenamed, & so to continue until the desired degree of consistency " has been obtained."

[Printed, 8*d*. Drawing.]

A.D. 1858, May 12.—Nº 1074.

LIÉTOUT, Alfred Léonor.—(*Provisional protection only.*)—"Improved portable, medical, and hygienic gymnastic apparatus." This consists of a foundation bed or frame on which are four uprights, which "serve as a support for all the ordinary parts "used for gymnastic purposes."

[Printed, 4*d*. No Drawings.]

A.D. 1858, May 14.—Nº 1087.

DICK, David. — (*Provisional protection only.*) — "Improved "cushions for trusses and other similar uses." These consist of "a small bag of caoutouc or other suitable material, filled "with air, in lieu of moc main or any of the materials now in "use."

[Printed, 4*d*. No Drawings.]

A.D. 1858, May 17.—Nº 1092.

JOHNSON, John Henry. — (*A communication from Douglas Bly.*)—"Improvements in the construction of artificial legs and "feet." These are, a lateral and diagonal flexion of the foot at the ankle joint is provided for, as well as the ordinary forward flexion. This is accomplished by connecting the foot to the leg by two sets of cords and springs, in combination with a universal or ball-and-socket joint. These two sets of cords and springs operate antagonistically to each other, one set being placed on each side of the ball-and-socket joint; hence it is obvious that a perfectly universal flexion of the foot is obtained in any direction. The springs used serve as muscles, and are made of india-rubber tubes, whilst the cords serve as sinews, and are so connected to the springs as to be capable of adjustment by nuts and screws, so that their tension may be regulated with the greatest nicety. Cords and india-rubber springs are also employed for connecting the toe or point of the foot to the body, so as to allow of free play at that part when required."

[Printed, 6*d*. Drawing.]

A.D. 1858, May 21.—Nº 1132.

HENRY, Michael.—(*A communication from Messrs. Vasseurs and Houbigant.*)—"Improvements in the manufacture or prepara-"*tion of ink and paper,* to adapt them for copying purposes; in

“ preserving food, skins, and hides; in rendering lint, vesicatory “ paper, and textile fabrics absorbent; and in treating mortar, “ cement, and other matters, in order to keep them in a damp “ state.” These are, first, “the application of glycerine to the “ purpose of obtaining copies of writings by preparing either “ the ink or the paper with glycerine, whatever be the means “ employed for preparing the same forthwith.”

Second, “the application of glycerine for the purpose of preserving food, skins, and hides; for keeping cement, mastic, “ mortar, paste, and other matters in a damp condition; and for “ rendering vesicatory paper, lint, and textile fabrics absorbent.”

Third, “preparing ink and paper for enabling copies or impressions to be taken.” “The writing paper may be prepared either “ by introducing glycerine into the pulp,” or “by damping it “ therewith after it has been made up into books or otherwise;” or “ink may be prepared or combined with glycerine.” Various receipts are given for inks.

Fourth, “rendering copying paper better adapted for the taking “ of copies or impressions by glazing, pressing, or saturating it.”

Fifth, “the preparation of hygrometric ink and paper, by means “ of glycerine, for the purpose of enabling copies or impressions “ to be taken without mechanical pressure.”

[Printed, 4*d*. No Drawings.]

A.D. 1858, May 22.—N° 1140.

FÉRON, PIERRE.—“An improved bandage or truss.” This “is “ formed by a steel spring fixed level with the external angle of “ the cushion on an iron pivot rivetted on the face of the cushion, “ a brass wire spiral spring rolled around the said pivot, a plate “ crescent-shape at one extremity, lined with skin, sewn in the “ middle, and fixed at the other extremity between the spring “ and the outer end of the iron pivot; a steel plate serving as “ skeleton to the cushion, and through the centre of which pass “ the pivot and spiral, and, lastly, as a fulcrum to the spiral by “ a metal plate supported in its turn by another spring. This “ bandage is to be applied in the same manner as other trusses, “ and when the hernia is reduced, the cushion will rest on the “ inguinal canal, and the crescent-shaped plate upon the belly. “ *During* defication, for instance, the trunk being inclined “ [illegible] the thighs bent over the basin, the abdominal

" plate will press strongly against the belly, and as the " abdominal coating is pushed forward and becomes rigid, the " lower extremity of the plate turns on to that furnished with a " small leather spring, which reacts on the spiral, and com" municates a pressure to the cushion. The great advantage of " this truss is the fixity of the cushion laterally, and its mobility " backward and forward during efforts of nature."

[Printed, 6*d*. Drawing.]

A.D. 1858, May 28.—Nº 1202.

MENNONS, Marc Antoine François.—(*A communication.*)— " An aperient biscuit." This consists of purified scammony, flour, and sugar, all in certain proportions; " the whole is brought " to the required consistence by the addition of a sufficient " quantity of white of eggs well beaten." The mass is divided into biscuits " which are baked in the oven."

[Printed, *d*. No Drawings.]

A.D. 1858, May 28.—Nº 1207.

BOND, Erasmus.—" An improved aerated liquid." " The pre" paration consists of citrate of quinine and salicine or quinine " alone, dissolved in water by the admixture of a little sulphuric " acid, or it may be dissolved by the carbonic acid gas;" " flavouring ingredients, if desired," are also added. The apparatus for impregnating with carbonic acid gas is the same as is used in the manufacture of soda water.

[Printed, 4*d*. No Drawings.]

A.D. 1858, May 31.—Nº 1220.

THORNBER, John Barker.—" Improvements in carriages for " children, commonly called 'perambulators,'" which improve" ments are also applicable to invalid and other carriages. These are shielding young children and invalids from rain, sun, cold, high winds, or sudden changes of the weather, and to remedy other evils to which they are liable by the present construction of these carriages, by employing or applying to such carriages, " a " circular covering or shade, constructed or applied in such " manner that it can be readily thrown either partially or com" pletely over the carriage or lowered on any sudden change of " the weather, *or as* may be required; such cover or shade to be

" made of either leather, oiled silk, cloth, or other suitable
" material, and to move or act upon hinges, or to slide in grooves,
" or by other convenient and portable means of application, and
" operated either with or without springs."

[Printed, 10d. Drawing.]

A.D. 1858, July 14.—N° 1583.

CHAPUSOT, François, and AVRIL, Victor.—(*Provisional protection only.*)—" Improvements in producing a perfect vacuum " and applying the same to industrial purposes." Among these purposes are named " the preparation of pharmaceutical products " or other similar purposes." This consists " in filling the baro- " metric vessel with water or any other suitable liquid; open " the stop-cock in order to let the liquid run out of the vessel; " turn the cock and close the vessel, in order to retain the " vacuum thus formed in the vessel; and finally, bring this " latter, by means of the hose, in direct communication with the " liquid matter to be acted upon, or with any other vessel in " which a vacuum is wished to be obtained."

[Printed, 4*d.* No Drawings.]

A.D. 1858, July 15.—N° 1594.

ASHMAN, James.—(*Provisional protection not allowed.*)—" Im- " provements in artificial legs and arms." These are first, " constructing artificial limbs wholly or in part of a new material, " viz., cloth or other textile fabric, cemented by glue or other " adhesive substance."

Second, " Covering certain portions of such limbs with animal " skin, to give such parts the appearance of natural skin."

Third, " arrangements for actuating the joints of artificial " limbs, whereby they have given to them increased elasticity."

[Printed, 4*d.* No Drawings.]

A.D. 1858, July 19.—N° 1630.

MAW, Solomon.—" An improved feeder for administering " food." " Into an ordinary bottle with a short neck, or into a " jar," " a tube is introduced extending to near the bottom of the " bottle, and slightly curved at its lower end;" upon this tube is " cast a rim or collar which fits tightly into the mouth of the

" bottle, and forms a stopper; the tube then rises in a bent or " curved direction from the outside of the collar, has a nozzle or " double ring formed thereon or applied thereto, and is continued " for about an inch therefrom; an india-rubber or other seat is " placed over the mouth of the tube and is fixed upon the nozzle " or double ring."

[Printed, 6*d*. Drawing.]

A.D. 1858, July 24.—N° 1673.

WIKOFF, HENRY.—(*A communication.*)—(*Provisional protection only.*)—" An improved aperient medicine, to be used in the shape " of a biscuit, cake, or sweetmeat." This consists " in mixing " Arabian scammony with the materials used in the manufacture " of cakes, biscuits, and sweetmeats." " Other aperient drugs " may be mixed in like manner, the object being to render doses " of aperient medicine less objectionable to the palate and less " difficult to retain on the stomach."

[Printed, 4*d*. No Drawings.]

A.D. 1858, July 29.—N° 1712.

GALLARD, AUGUSTE. — (*A communication from John Rainal and Joseph Rainal, junior.*) — (*Provisional protection only.*) — " A new system of trusses." This system " is used for the " relief and cure of all kinds of hernia, and specially of simple " and double crural hernia, umbilical hernia, displacement of the " womb and falling of the rectum. It is based on the following " principles:—1st. To replace the flat springs used in the ordi- " nary bandages to obtain the pressure on the injured part by " a small lever concealed in the cushion so as to take advantage " of the strong part of the body (the loins) and to obtain the " pressure upon the soft part (the abdomen). 2nd. To replace " the ordinary cushions by stamped plates, slightly stuffed, quite " as soft as the former, but not becoming flat as they do. 3rd. " The application of a small band, allowing, by means of a screw, " the variation of the pressure to the exact point required. From " these principles are derived the five following apparata:—1st. " Belts with levers for simple and double crural hernias. 2. Belts " with levers for umbilical hernias. 3. Belts with levers for div-

"placement of the womb. 4. Belts with levers for falling of the "rectum. 5. Ordinary hernia belts, to which can be applied the "stamped plates as cushion."

[Printed, 4d. No Drawings.]

A.D. 1858, August 5.—N° 1776.

LUIS, Jozé.—(*A communication.*)—"A new system of truss." A "double bandage." "The back pads are made round and "moveable, and are pierced with holes, in order to establish a "current of air; they thus prevent the heating of the part covered "by the pad of the spring. The under part of the pad is made "of cork, and the over plate of metal. The holes in the cork are "larger than those of the metal. The end of the spring is joined "to the back part of the pad by means of a screw. A leather "band is attached to the two pads, thus the pressure does not "fall on the spine. The inner side of the front pads are hollowed "out, the outer side is placed along the thigh, the pad is formed "so as to suit the size of the stomach of the person affected; the "lower part of the end is hollowed out, and has a sort of chin at "the bottom formed to enclose the pubis. The pads are move-"able, but by means of two screws fixing into holes in the pads "which join the front band, the necessary shape can be given. "The outer plates of the pads are copper silvered to prevent "oxidation, but they can of course be made of any metal." The single bandage is on the same principle as the one described. "These bandages can be made far behind, the outer plate of the "pad being of the same piece of metal as the spring, so being "less thick on the body. In using this bandage it is advisable "to steep the cork for a short period sometimes in some white "wine, to give a proper elasticity to the cork, and also to act in "some measure as a tonic to the part affected."

[Printed, 6d. Drawing.]

A.D. 1858, August 20.—N° 1897.

FIGGETT, James Lewis. — "An improved construction of "syringe or hand pump." "The chief object" is "to throw a "small continuous stream for medical purposes by the use of one "hand only instead of two hands, as is at present required to "work injecting syringes." For this purpose an air-tight barrel is constructed, to the lower end of which a hollow piston is fitted, the hollow rod of which forms the supply pipe. In this piston is a ball or other valve, and at or about the middle of the barrel is a second or similar valve, above which branches off the discharge pipe. The piston is connected "with the lower end of "the barrel by means of a coiled spring, the action of which is to "draw down the piston to the bottom of the barrel; air-holes "are made in the barrel to admit air to the under side of the "piston." In using this instrument "the discharge pipe is "connected by means of a flexible tube with a pierced discharge "tube suited for the special object" required, and "the foot of "the hollow piston rod is inserted in the vessel containing the "injecting fluid." The operator then grasping the barrel in one hand presses it down "and thereby compresses the spring; then, "by removing the pressure, he allows the spring to expand and "draw back the piston," "both the descent and advance of the "piston causing a discharge of the fluid."

[Printed, 10*d*. Drawing.]

A.D. 1858, September 7.—N° 2019.

CHAMPNESS, William Swain.—(*Provisional protection only.*)—"Improvements in syringes for male and female use." These are glass tubes "in connection with an india-rubber ball or "elastic chamber attached thereto." The mouths of the tubes are of the following forms, trumpet-shaped, spherical, rounded, pointed, &c.

[Printed, 6*d*. Drawing.]

A.D. 1858, September 8.—N° 2036.

BROOMAN, Richard Archibald.—(*A communication from P. G. Barry.*)—(*Provisional protection only.*)—"An improvement "in the preparation of the sulphate of quinine." This consists in using liquid hydrocarbons instead of alcohol; they "may be "used over and over again."

[Printed, 4*d*. No Drawings.]

A.D. 1858, September 10.—N° 2053.

KOENIG, Jean Prosper.—"Improvements in a surgical instrument called a pneumatic cathetor." These are as follows:—Into a crystal vessel pour a certain quantity of spirits of wine to which set fire. Then close the vessel by a stopper having an india-rubber tube with an obturator, before which is a cock to shut out the air. On extinguishing the flame a vacuum is formed in the vessel and tube, the extremity of the obturator is introduced into the urethral canal, and an india-rubber cup slightly anointed with an unctuous matter completes the cohesion, and prevents the introduction of air from the exterior; the cock is then turned, and the vacuum opens a canal to the bladder, which carrys the urine into the vessel. When the flow of urine has ceased, a valve is pressed which admits air into the vessel, destroying the vacuum, and permitting the removal of the obturator. Or in lieu of the valve a tap may be opened at the bottom of the vessel by which the urine may be withdrawn. If preferred, a spirit lamp moveable in its axis may be introduced into the neck of the vessel. "Or, I dispense with fire, using a force pump with two " conduits, furnished with valves, the one opening ejecting the " gases or liquids, the other closes: this is applicable to every " description of catheter. Or, I use a hollow cylinder, the upper " orifice closing with a key, the lower by a tap which is opened " when the cylinder is filled with liquid. A winch placed on the " neck of the cylinder on being turned raises a piston furnished " with a spiral rod, and exhausts the air in the cylinder. Or I " use a crystal globe surmounted by an air pump, the metal neck " having an inner canal communicating with the pump. A key " closes the globe when the air is exhausted, and by removing " a screw or screws the pump is separated therefrom."

[Printed, 1*s*. Drawings.]

A.D. 1858, September 11.—N° 2067.

WIKOFF, Henry.—(*A communication.*)—(*Provisional protection only.*)—" A new tonic medicine for the cure of coughs and diseases " of the chest." This consists in " the sap from the maritime " pine." " either in its natural state or when clarified, or after " being made into a syrup."

[Printed, 4*d*. No Drawings.]

A.D. 1858, October 5.—N° 2215.

LOVETT, George.—(*Provisional protection only.*)—" Improvements in portable apparatus for administering hot air, vapor, " and shower baths." These are as follows :—" a shallow bath

" pan, has a frame," to carry " a chair on which the patient is to " sit." Under this chair is " a metal box pierced with holes, and " into which enters a steam pipe fitted with a tap and leading to " a boiler;" from the bath pans are rods on which is mounted a vessel for containing the shower-water; curtains are arranged, &c. For administering hot air a gas stove is under the chair. The heat of the stove drives sulphur, mercury, &c. into vapor, if such are required to be administered.

[Printed, 4*d*. No Drawings.]

A.D. 1858, October 13.—N° 2281.

TREACHER, William Higgingbotham.—(*Provisional protection only.*)—" Improvements in respirators." These are, first, " in forming respirators with separate chambers for inhalation " and exhalation." The respirator has an outer shield with a small distance behind a similar plate, and both plates brought together at their ends. A partition is fixed " along the centre of " and between the plates," which " shuts off all communication " between the top and bottom of the plates." In the back plate slots are cut into the divisions, having valves " one to open in- " wards and the other outwards."

Second, " placing powdered charcoal on sponge moistened with " any chemical purifying agent in that chamber to which the " valve opening inwards is fitted."

[Printed, 4*d*. No Drawings.]

A.D. 1858, October 15.—N° 2305.

WAINWRIGHT, John—(*Provisional protection only.*)—" Im- " provements in respirators." These are, first, in " having two " valves, thereby allowing the inhalation and exhalation to be " conducted through separate media."

Second, employing " a series of metal plates, by preference, " three in number, in place of the wire gauze usually em- " ployed."

[Printed, 4*d*. No Drawings.]

A.D. 1858, October 16.—N° 2311.

FRANCIS, Henry.—(*Provisional protection only.*)—" Machinery " for making the springs of surgical trusses." This consists of " a pair of rollers arranged so as to admit the passing between

" them a strong iron plate supported on friction rollers, on " which plate I affix the various steel moulds, shaped so as to " give the required forms of the different kinds of truss springs; " or I pass the moulds between the rollers without a bed plate." To produce a truss spring a strip of hot steel is passed through the above, "I take the springs so rolled and give them the " required shape to fit the human body by passing them between " three rollers;" "two of the rollers revolve in the same " direction, the third roller, which bends the strip of steel, is " elevated or depressed by a lever or other known means. The " distance between the levers is varied to produce the different " curves required by passing between rollers patterns of the " requisite shapes, or by guides of the necessary undulating " forms which raise or depress the levers; or other means acting " on the rollers or cams may be attached to the rollers to give " them the requisite irregular motion required to produce the " necessary curves."

[Printed, 4*d*. No Drawings.].

A.D. 1858, October 29.—Nº 2419.

ZANNI, Geminiano.—" Improvements in arranging magneto- " electric machines for medical and other purposes." These consist " in combining magneto-electric machines with main- " taining springs and wheelwork, so that when they are required " for use the spring being liberated causes the armature of the " machine to rotate, and so produces a succession of currents or " shocks, in the circuit of which the wire coils surrounding the " armature from a part." " A weight may be employed in place " of a spring for actuating the armature and coirs."

[Printed, 10*d*. Drawing.]

A.D. 1858, November 2.—Nº 2439.

MENNONS, Marc Antoine François.—(*A communication.*) —" An improved combination for the production of voltaic " electricity, and its application as a curative agent to certain " parts of the human body." " This consists " in a voltaic arrange- " ment composed of zinc and copper wires twisted together, or " connected by other suitable means to the after form required." " *A crown or circlet* is composed of alternate zinc and copper " *wires twisted together*;" a garter is formed in the same way;

a hair pin is also formed in this way, or "composed of several voltaic couples formed of zinc or iron and copper;" a hair pin may also be formed having "one branch" "of an electro-positive, and the other of an electro negative metal," or "the forked part being in zinc, and the extremities in copper, or" thin copper wire rolled over a zinc core, or of thin zinc wire on a copper core. "Other metals, such as gold, silver, platinum, aluminium, &c. &c., may be substituted for the copper," and "the zinc may be replaced" also by another metal."

[Printed, 6*d*. Drawing.]

A.D. 1858, November 2.—N° 2440.

TOMASINI, DOMENICO.—(*Provisional protection only.*)—"Improvements in respirators." These are, first, attaching them "when for men to the inside of a false beard or moustache," so as to conceal the respirator. When for females, "instead of the false beard" it is proposed "to cover it with a false mouth imitating as nearly as possible the natural colour and appearance of the skin and lips."

Second, "applying the loose fur or hair of animals to the inside of respirators, either in addition to or as a substitute for the ordinary materials employed."

[Printed, 4*d*. No Drawings.]

A.D. 1858, November 3.—N° 2452.

TERTIAN-MORET, HYACINTHE.—(*Letters Patent void for want of Final Specification.*)—"The application of a mineral named deterso as a disinfecting, preserving, absorbing, & curative powder." "This mineral is of a greyish color, and is found generally in mountainous districts, and in France principally in the departmentof the Bouches du Rhone, where it exists in large quantities."

The mode of preparing the powder for use is calcining it strongly, crushing it into a fine powder and sifting it; it is applied to any part of the body.

[Printed, 4*d*. No Drawings.]

A.D. 1858, December 11.—N° 2849.

ROLLASON, ALEXANDER.—"Improvements in the manufacture of waterproof tissues, and in applying such waterproof

" material to woven fabrics and manufactured fibrous goods." These are, in reference to this subject " the manufacture of " waterproof tissues to be used as artificial cuticles for surgical " purposes." Taking pyroxiline, dissolving it in any of its known solvents, producing collodion, or taking collodion and mixing it with a vegetable oil, preferring castor oil, about one-sixteenth of the weight of collodion, sometimes adding a gum or balsam, Canada preferred, about one to two per cent. " Mineral " naphtha or its various products, turpentine and spirituous " oils may also be sometimes employed in the mixture together " with tannin, perchloride of iron, and chemicals generally " of a healing nature and held in solution. This solution is poured upon a smooth glass plate, the spirit allowed to evaporate; a thin film is left on the plate, which is stripped off, and stored in books, is ready for use, " and may be easily applied in the same " manner as goldbeaters' skin."

[Printed, 4*d*. No Drawings.]

1859.

A.D. 1859, January 11.—N° 85.

RUBENSTEIN, BERNARD JOSEPH. — (*Provisional protection only.*)—" Improvements in dentistry." These consist " in the application of gold plates, not as heretofore used or applied, but " as base pieces beneath artificial gums of hippopotam (or the " tusk of the sea horse) or ivory." Tortoiseshell is employed " in certain cases as a substitute for metal plates." Employing " in the construction of plates and for other such dental purposes " mother of pearl in place of gold or other metal basis or " plates, or of hippopotam, ivory, tortoiseshell, or other materials " used in connection with artificial teeth." " In connection with " the employment of mother of pearl," employing " metal for " forming the bands or clasps, and where necessary for other " parts of the construction."

[Printed, 4*d*. No Drawings.]

A.D. 1859, January 21.—N° 193.

CHILDS, JAMES.—" An improvement in applying heat in the " manufacture of artificial gums and teeth, and other articles

" composed of india-rubber or gutta percha, combined with sul-
" phur." This is said to consist in employing " steam of com-
" paratively low pressure, which is, when out of contact with
" water, heated to the requisite high degree of temperature known
" to be necessary for converting articles made of the compounds
" above mentioned into the elastic or the hard or bone or horn-
" like condition as may be required." For this purpose a pipe from a steam boiler delivers steam into the bottom of a chamber or vessel heated by gas jets or otherwise; above this pipe the goods are placed on a false perforated bottom. There is a tap for running off any water which may be condensed, a safety valve at the top, and a hollow space for a thermometer. The " separate
" generator may be dispensed with " when the process is conducted as follows :—" introduce into the vessel about as much water as
" will, when it is vaporized, fill the vessel with steam " of the pressure required, and " use a safety valve weighted to the desired
" pressure." By these means the vessel, when heat is applied
" thereto, will generate steam, and any excess will go off by the
" safety valve, and the remaining atmosphere of steam contained
" in the vessel will then become heated up to the high degree of
" heat desired, without so increasing the pressure as to be liable
" to injure the vessel."

[Printed, 10*d*. Drawing.]

A.D. 1859, January 24.—N° 215.

SAVORY, John, and BARKER, Robert William.—" Im-
" provements in bottles for medicines and poisons." These are,
" forming the bottle of six, eight, or more sides, and fluted verti-
" cally, horizontally, or diagonally, or it may be embossed, or
" otherwise ornamentally raised on the outer surface," &c., " so
" that a person taking hold of it either in the dark or thought-
" lessly must immediately find that the bottle is unusually strange
" to the hand." Also, " narrowing of the lower part of the neck of
" the bottle, or forming a lip or flange in the interior of the neck
" of the bottle immediately under the stopper or cork," so as it
" will run in drops."

[Printed, 4*d*. No Drawings.]

A.D. 1859, February 8.—N° 352.

BAGNICKI, Ernest.—" An improved syringing apparatus for
" curing leuchorrhea and similar sexual diseases." This may be

described as follows :—A chair is fitted below with a tank which is divided into two chambers by means of a perforated diaphragm. " Into one of these chambers is poured the fluid to be injected, " and in the other is fitted an ordinary double-action force pump, " with peculiarly constructed valve seats or chambers." The fluid is " forced by the aid of a suitable flexible injection pipe into " the womb," the waste fluid running off through another chamber. " The valve chambers of the pump are provided with two " openings and seats, both precisely the same, and situate one above " and the other below a metallic ball valve. The valve openings " are made smaller than the bore of the pipes or passages leading " thereto." On starting the pump the balls are lifted up, but coming in contact with the valve seat above, the passage is closed, " when the ball will fall again by its own gravity upon the lower " seat, to be again forced upwards by the fluid." " This alternate " vibrating motion of the ball valves between their upper and " lower seats causes a species of electricity to be imparted to the " fluid," which " produces the curative effect." " By increasing " the number of vibratory ball valves the electricity may be " increased to any desired extent."

[Printed, 6*d*. Drawing.]

A.D. 1859, February 11.—N° 388.

COGAN, Robert.—" Improved instruments for crushing and " mixing solid and liquid substances." These instruments are, in preference, made of glass, and will be found useful for mixing medicines, especially the latter one. The first consists " of a stem, at one end of which is a flat, octagonal, round, or " other shaped disc, and the opposite end is spread out into " the form of a bulb, the under part of which is hollowed out."

Second, the other instrument consists " of a stem, pointed at " one end, and at the other end is a round or oval bulb hollowed " out as in the former instance."

[Printed, 6*d*. Drawing.]

A.D. 1859, February 16.—N° 430.

BOURJEAURD, Pierre Marius Philip.—(*Provisional protection only.*)—" An improved apparatus for supporting the " womb." This " consists of a mushroom-shaped vessel, in " *caoutchouc,* with an aperture through the centre," with straps for securing it round the body. "The vessel is hollow, and may "be permanently sealed, or it may be connected with a pipe "fitted with taps and an air bag."

[Printed 4*d*. No Drawings.]

A.D. 1859, March 5.—Nº 578.

BAILES, William, and BAILES, James.—(*Provisional protection only.*)—"An improved ship's berth for prevention of sea "sickness, composed of wood and metal." This consists of a cradle or sleeping part suspended on two pivots, one at each end. Vulcanized india-rubber bands are attached to one end of the cradle, the other end being fixed to the frame in which the cradle swings; there are also bands at the ends fixed upwards and downwards so as to equalize the strain caused by the oscillation. "The cradle is composed of ribs of iron or wood, with laths "of same material laid longitudinally," and "lined with felt "blanketing or any other material, & a mattrass to fit the "bottom."

[Printed, 10*d*. Drawings.]

A.D. 1859, March 7.—Nº 589.

PATRICK, Hugh William.—(*Provisional protection only.*)—"An improvement or improvements in an apparatus for chemical "and dental laboratories, or other manufacturing or experimental "uses, which I propose calling a paragon laboratory forge." This "consists in the construction and arrangement or combi- "nation in an apparatus of a smelting furnace, cupelling furnace, "an annealing furnace or oven, a digester, with a dry hot bath "for dry heats, a sand bath and a steam bath, a brazeing lamp to "be used separately or detached and portable, and the whole so "constructed as to be heated by coal gass, or any other gasses, "or fuel, or combination of them, and by means of a portable "funnel to connect the same with the flue of a chimney, or it "can be used without such connexion."

[Printed, 4*d*. No Drawings.]

A.D. 1859, March 8.—Nº 608.

BELLING, Bennett Mitchell.—(*Provisional protection only.*) —"Improved apparatus for hardening india-rubber for the bases "of teeth." This consists of a chamber, in preference "of wrought

" iron, with an escape pipe and stop-cock; a series of gas jets are " arranged at the lower part or underneath this chamber," or other heat may be applied. The artificial gums of india-rubber in a soft state, enclosed in plaster moulds, within metal boxes, are placed on the shelves of the heated chamber. "The apparatus is furnished with a thermometer to indicate the heat of " the interior of the chamber."

[Printed, 4*d*. No Drawings.]

A.D. 1859, April 1.—Nº 815.

SIGISMUND, ISIDOR.—(*A communication from Simon Baron Sigesmond.*)—(*Provisional protection only.*)——" Certain improvements in the manufacture of artificial teeth, and in the apparatus connected therewith." These are as follows:—"The " tusk or tooth of the morse or walrus is first sufficiently softened " by acids as to be rendered plastic; it is then to be pressed in a " mould or moulds," "so as to bring the outer covering or " enamel of the tusk to the front, from which the artificial teeth " are to be moulded." A certain intermediate flesh-coloured layer forms the gums, and the "centre or spungy portion of the tusk, " also tinted flesh color, is made available for the palate, which " is so formed as to be self-adhesive."

[Printed, 4*d*. No Drawings.]

A.D. 1859, April 21.—N 1001.

DAWSON, THOMAS, and AVERY, JOHN.—(*Provisional protection only.*)—" Improvements in pencil cases, watches, seals and " keys, tooth-picks, and other like articles of jewellery, lockets, " penknife handles, porte-monnais, and other like articles." This consists in constructing them so as "to allow space and accommodation for a number of postage or receipt stamps or tickets, " to be wound in and out by mechanical contrivance that shall " have a propelling power regulated by the number of stamps " to be wound in or out." " A tape line may be combined with " said articles."

[Printed, 4*d*. No Drawings.]

A.D. 1859, April 28.—Nº 1073.

TOMPSON, WILLIAM ALONZO.— " Improvements in apparatus for applying liquids to the throat and air passages for

" medical purposes." These consist of a gas holder, containing air under pressure; this is connected with a vessel, which contains usually a solution of nitrate of silver; this vessel contains a piece of glass rod, having a number of capillary passages through it; " one end of this rod dips in the liquid, while the other rises " above it. The air in entering impinges or presses on the sur- " face of the liquid, and forces it through the passages in the " rod; it is thus brought within the range of the current of air, " and is carried by it through the escape tube or jet; at the end " of this tube there is a covering of very fine gauze of silver " wire, through which the solution can escape to the throat only " in an extremely divided state."

[Printed, 6*d*. Drawing.]

A.D. 1859, May 3.—N° 1107.

CLARK, WILLIAM.—(*A communication from Lalonel de Sourdeval.*)—" Improvements in obtaining quinine and the principal " organic alkalies." These are in using fatty acids instead of alcohol essences or hydrocarbon oils. " A decoction is obtained " from the bark " by " means of hydrochloric or sulphuric acids," an alkali added very slightly in excess, and the whole boiled with a fatty acid, forms a layer on the top which contains the alkaloids. On cooling this solidifies, after which it is boiled with water and treated with acid water for the alkaloids.

[Printed 4*d*. No Drawings.]

A.D. 1859, May 17.—N° 1222.

OWEN, LEMUEL DOW.—(*A communication from Herman W. Ladd.*)—" An improved menstrual receiver or truss." This consists of two air-tight crescent-shaped hollow vessels, which, when inflated with air, form elastic cushions, flexible in all directions; these are joined together by a syphon or connecting piece of flexible waterproof material, forming a space between the cushions for a sponge. The cushions are connected together by a pipe, " so as to allow a free passage of air from one to the " other."

[Printed, 6*d*. Drawing.]

A.D. 1859, May 20.—N° 1243.

NEWMAN, HENRY.—" Improvements in the construction of " artificial teeth, and in the mode or manner of affixing the same

" to the frame." These are, "constructing artificial teeth with " plates and apertures or tubes at the back, and fastening the " same to the frame by studs or pins passing into or through " the apertures or tubes." The fronts are " porcelain, or any of the " other substances at present used, and the backs of metal or " other hard tenacious material." These are fastened together by " screws, rivets, part of the back cast or moulded into the fronts, " or by an adhesive material." "The frame or palate has studs " or pins fastened therein, which are made of the same shape " and configuration as the apertures or tubes on the back of the " teeth," in which they are rivetted or otherwise fastened.

[Printed, 6*d*. Drawing.]

A.D. 1859, May 23.—N° 1264.

BURNELL, George.—"An improved preparation of medicine " for the cure of ague." This is a powder "to be mixed with and " taken in warm milk, or it may be in tea, before the shivering " commences," and " afterwards repeat the same dose about " every two hours, so long as the shivering continues ;" it consists " of rhubarb, bark, snake root, quinine, and salts of tartar," of which the proportions considered the best to be used are given.

[Printed, 4*d*. No Drawings.]

A.D. 1859, May 26.—N° 1300.

PATRICK, Hugh Miller.—" A new substance or material to " be used in lieu of ivory and other like substances." This is a substance applicable to dental and many other purposes, and is made by employing, " separately or combined, in suitable proportions, amber, Canada balsam, the Australian gum kowrie, " potato flour or fecula, and with these substances, or any of " them, combining meerschaum, paper pulp, calcined bones, " fluorate of silica, sulphide or sulphurats of mercury (vermilion) " or of other metals, chlorides of zinc or other metals, alkaline " preparations, asbestos, fluxed or fritted colors, or finely powdered pumice stone, sulphur, india-rubber, or similar gums." " Other "resinous, glutinous, or any laceous substances may " be used." The gums may be fused, and the other substances added, but it is preferred to " dissolve the gums employed in " naphtha, methilated spirits, chloroform, or essential oils, &c."

" When shaped or moulded, the new material is hardened by " the application of heat."

[Printed, 4*d*. No Drawings.]

A.D. 1859, June 1.—N° 1349.

MIQUEL, Jean Felix.—" Improvements in trusses." These " relate to trusses for curing, restraining, or containing hernia, " and consist in providing them with a short bent metal elastic " lever, or strong spring, one end of which is caused to press on " the hernia by means of a proper cushion or pad, while the " other end is held by suitable straps embracing the thigh or " buttock of the patient, and fixed at the required length to a " belt arranged round the waist, the ends of which belt act on a " spring pressing on the pad."

[Printed, 6*d*. Drawing.]

A.D. 1859, June 11.—N° 1421.

ASH, George Claudius.—" Improvements in the manufac" ture of artificial teeth." These relate to teeth "moulded in a " description of porcelain," and " set in a base of a material " which is moulded on to the teeth, and afterwards hardened " (such as vulcanite)." To obtain " a complete adhesion between " the teeth and the base," applying to the parts of the teeth " which come in contact with the base " a coating of powdered " silica or other refractory substance which will not run into " a glaze during the firing." Powdered silica in gum water is used, or magnesia may be employed, or the surfaces may be roughened on a grindstone, or by fluoric acid. Each tooth is furnished with projections and pins.

[Printed, 6*d*. Drawing.]

A.D. 1859, June 20.—N° 1484.

HAWKES, Alfred James.—(*Provisional protection only.*)— " An improved triturating apparatus." This " consists in im" parting to the pestle a combined vertical and rotatory action, in " place of the simple rotatory movement, as at present, the said " action being given through the intervention of toothed pinion " and eccentric gear, direct from the winch handle or crank " motion."

[*Printed, 4d. No Drawings.*]

A.D. 1859, June 21.—N° 1496.

OLIVER, Ebenezer.—(*Letters Patent void for want of final Specification.*)—" Improved medicinal mixtures for the cure of rheu-" matism, tic-doloreux, lumbago, cramp, sciatica, and such like " complaints." These are, first, an embrocation composed of " oil " of juniper, spirits of wine, spirits of nitre, spirits of turpentine, " laudanum, castle soap, oil of vitriol," in certain proportions.

Second. Drops to be taken inwardly, by mixing " oil of juniper, " spirits of wine, spirits of nitre, spirits of turpentine, soccatrine " aloes, and oil of lavender," in certain proportions. The above are " subjected to gentle heat during mixing."

[Printed, 4*d.* No Drawings.]

A.D. 1859, July 15.—N° 1677.

McANDREW, William, and BOYD, Charles Wilson.—(*Provisional protection only.*)—" Improvements in treating poppies " to obtain a product resembling opium therefrom." These are as follows:—dried poppies are ground and treated with a solvent, alcohol preferred, and the solution evaporated in a still. The product "remains behind in the still." It is stated that "here-" tofore opium has been obtained by making incisions in the " poppy," and the juice which runs therefrom is "treated in " various ways."

[Printed, 4*d.* No Drawings.]

A.D. 1859, July 20.—N° 1708.

ORIOLI, Zephirin Gaspard Alexandre Nathan Petrone. — " New applications of hypochloride of alumina to " bleaching and dyeing, and to the disinfection and preservation " of organic matters." Among these " new applications," which are detailed, are the preservation of " anatomical preparations," " and " embalming bodies and other matters."

[Printed, 4*d.* No Drawings.]

A.D. 1859, July 30.—N° 1765.

WOOD, Joseph.—"An improved truss for hernia." This consists "in forming a plate of metal, or of any other suitable " material, of such shape and size as will allow of its being com-" fortably worn, and extending across the pubic region, and " having a suitable pad or cushion at each extremity. The pads

" or cushions are thus made to bear on the abdominal rings at " the same time, and the whole is kept in position by a suitable " belt and straps." By modifying this, it is made "applicable " to inguinal, scrotal, and femoral hernia."

[Printed, 6*d*. Drawing.]

A.D. 1859, August 8.—N° 1826.

OLLIVIER, Louis Bertrand.—"Improvements in closing or " stoppering bottles, jars, and other receptacles." These consist " in forming two holes diametrically opposite to each other in " the neck of the bottle or vessel." After the cork, &c. is placed in position, "a nail, pin, or other rod is forced through " it." In capsuling or sealing bottles, &c. "the cross pin may " be enclosed in the capsule, or it may receive two wires, which " pass under the seal and label."

[Printed, 6*d*. Drawing.]

A.D. 1859, August 9.—N° 1842.

LAWRENCE, Frederick Louis.—"Improvements in coloring " and hardening elastic gums for dental purposes." These are as follows:—Caoutchouc, sulphur, oxide of zinc, and cinibar " (vermilion)," are incorporated together, (the proportions believed most suitable are given) and moulded into the desired form, and " retained in the moulds are subjected to heat," after which they are polished, and immersed in alcohol, and exposed to the sun's rays, "by which the color of the india-rubber compound will be " changed and the desired effect produced."

[Printed, 4*d*. No Drawings.]

A.D. 1859, August 9.—N° 1848.

WAITE, Joseph.—"Improvements in making infusions for " pharmaceutical purposes, which improvements are also appli- " cable to other purposes of a similar nature." This "relates to " an improved system or mode of making infusions of all kinds, " whether hot or cold, and consists essentially in making infu- " sions under pressure, the water employed being forced by means " of a force pump into, and among, or through the ingredients " from which the infusion is to be made. These ingredients are " for this *purpose* contained within a suitably-sized vessel or

[illegible] pump or apparatus."
[illegible] preparation of tinctures
[illegible]

[illegible] —N[illegible] 1867.

[illegible] in the preparation [illegible] purposes." These consist [illegible] essential oils, so as to [illegible] them to the sun's [illegible] ozonized air, [illegible] atmospheric [illegible]."

[illegible] —N[illegible]

[illegible] preparation and [illegible] and other [illegible] of the aerated [illegible] aeration."
[illegible] atmosphere of [illegible]
[illegible] an atmo- [illegible]
[illegible] them the [illegible] gases, and [illegible] to be [illegible]

[illegible]

[illegible] —" Im- [illegible] and in ma- [illegible]." These [illegible] suit- [illegible] are only [illegible] consists [illegible] of the form [illegible] works in [illegible] raised [illegible] through a short range. There are arrangements for fixing platinum wires, &c.

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 5.—N° 2023.

BUSH, WILLIAM.—(*Provisional protection only.*)—" Manufac-
" turing granulated seidlitz powders." This consists " in granu-
" lating seidlitz powder while in a partial state of fusion."

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 6.—N° 2031.

GELDARD, RICHARD KELLY.—" Improvements in the method
" of and apparatus for making pharmaceutical or other infusions."
These are as follows :—A pan or vessel " less in height than it is
" in diameter," by preference, made of " pure tin hardened with
" antimony or silver " is used. Inside, and near to the top of this pan are two perforated metal strainers, between which the ingredients to be infused are placed; cold water is then added until the ingredients are covered, and the whole is brought to boiling, after which the pan is covered with " felt or other non-conductor
" for about five minutes," when it is " placed in an open vessel," and cooled by pouring cold water on the lid. " The first and last
" operation may be dispensed with, and boiling water poured in
" the usual way."

[Printed, 6*d*. Drawing.]

A.D. 1859, September 10.—N° 2067.

POLLOCK, JOSEPH.—(*Provisional protection only.*)—" Improve-
" ments in the manufacture of beds, couches, and invalid or
" other carriages." These are " in the adaptation to an ordinary
" bed or couch, or to any suitable frame of wood or metal, of a
" moveable frame formed of four unequal parts or divisions,
" attached to each other by hinges or other suitable means."
" One of these parts is attached permanently to the bedstead or
" frame, and the remaining three are capable of being elevated
" or depressed to any required angle by means of metallic or other
" toothed segments, which may be fixed in any position by palls
" or pivots attached to the standing frame or bedstead."

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 20.—N° 2145.

COLLIER, Edward.—(*Provisional protection only.*)—" Improve-" ments in ear dilators." These are, making " ear dilators with " the tube or part inserted in the barrel of the ear in two or more " parts, the division or divisions being longitudinal." The parts hinged together are placed in the ear in "a collapsed state, and " afterwards expanded by a thumb screw " or otherwise.

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 27,—N° 2182.

COALES, Robert.—(*Provisional protection only.*)—" An im-" proved preparation or preparations for promoting the growth " & otherwise improving the hair, & for the application of a " certain material for like purposes." This consists of glycerine, 85 parts ; cajeput oil, 3 parts ; kino, 9 parts ; and cantharides, 3 parts ; these substances are mixed together with or without heat, adding aromatic essences or other scents according to fancy. The above proportions may vary, " or the glycerine may " be combined with other matters."

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 28.—N° 2196.

STANFORD, John Fordham.—" An improved apparatus for " giving warmth to the lower extremities and members of inva-" lids and others when travelling, or in churches, chapels, " theatres, rooms, carriages, and other similar places, and on " shipboard, & also for airing carriages." This consists in " the " combination of a lamp and apparatus, and a stool or settee or " bed, or other article of furniture to sit or recline in," as follows : A box or case of tin or other suitable material is made with a lid to open at pleasure, and covered with any suitable fabric ; inside is " a lamp which is hung in frames on gimbles, in order that it " may not be upset ;" an inverted hollow cap or dome is " fixed " above the lamp. From this dome or inverted cap four tubular " flues proceed, and open out at the sides of the stool. In some " cases only a single flue is used, and provision is made to connect " it with an outlet in the bottom of a carriage when the stool is " to be used in a carriage, or more or less flues may be used in a " stool in order to diffuse the heat of the lamp." The lamp is suspended between two plates; the upper one is perforated with numerous holes, and air is admitted below the upper plate by a grate or gratings at the side or sides of the stool. The upper part of stool is rendered elastic by spring stuffing or otherwise. " The manner of constructing footstools and of suspending " lamps therein way be varied."

[Printed, 6*d*. Drawing.]

A.D. 1859, September 28.—N° 2197.

EVANS, GEORGE, and HUXLEY, EDWARD.—(*Provisional protection only.*) — " Improvements in the construction of hernial " trusses and pads, adapted to surgical purposes generally." These are, employing " vulcanized or other caoutchouc instead of " metallic springs." A hollow ball of these materials is filled " with gossamar down-like substance known as ' mock main,' an " article introduced in a patent granted to the above-named George " Evans, N° 8904," Old Law, or other suitable material. At the back of the pad is a metallic plate. " Instead of metallic springs " for adjusting the pressure of the pad," a band or tube of caoutchouc is " attached at one end to the plate by a stud, the " other end being fastened to the other end of the thigh strap."

[Printed, 4*d*. No Drawings.]

A.D. 1859, September 28.—N° 2199.

LAVATER, MANUEL LEOPOLD JONAS. — " Improvements in " apparatus known as injection bottles, and in pneumatic discs " used in apparatus for adhering to glass and other impermeable " substances." These are, first, the necks of such bottles " are " cast with such an enlargement or thickening at the outer ends " thereof as to dispense with the use of the separate or distinct " mouthpiece of wood or of other material heretofore used, the " edges of the india-rubber bottles fitting tightly to the exterior " of the clyster or such like pipe," or the ordinary form of bottles may be used, and " the clyster or such like pipe may be fitted " into it, the pipe being larger."

Second, manufacturing " india-rubber discs for pneumatic pur- " poses," with " extra thickness or substance at the edges and " tubular centres."

[Printed, 8*d*. Drawing.]

A.D. 1859, October 6.—N° 2274.

O'CONNELL, Edward.—" Improvements in apparatus for sup- " plying liquid nourishment to infants, invalids, and others, and " for warming and heating the same." These are, first, " em- " ploying a perforated capsule lined with cork, leather, caout- " chouc, or other flexible material, made to fit over the neck or " contraction of the bottle ;" a syphon tube with the teat attached is permanently held to a nozzle or projection from the perforation of the capsule, or it may pass through the capsule, and a flexible joint attaches to it, the tube in the vessel, or a small tube passes through the capsule and the exterior and interior tubes are attached to it by flexible joints, and a piece of elastic tube is attached to the lower end of the interior tube. The bottle is surrounded with some flexible material.

Second, in warming or heating the liquid, employing " a night " light placed in a cell at the bottom of a perforated cylinder," with a rim to support the vessel with the liquid to be warmed, &c.

[Printed, 10*d*. Drawing.]

A.D. 1859, October 8.—N° 2295.

CHILDS, James.—" Improvements in the manufacture of arti- " ficial gums." These are, first, " when employing compound " india-rubber and sulphur hardened by heat," " using a different " material or compound of india-rubber or of gutta percha for " the outer surface or parts of the gums which come in sight " when in use, to that which is used in producing the other parts " or main body of the same." " A compound may be employed " for the outer surfaces of the gums, which, although of a good " and natural color, is too weak or brittle to be used alone, " whilst the main body of the gum is composed of a stronger " compound."

Second, combining " metal frames with hardened compounds " of india-rubber in the manufacture of artificial gums." Similar frames to those employed have " before been used in combination " with gutta percha," but not " with hardened compounds of " india-rubber,"

[Printed, 4*d*. No Drawings.]

A.D. 1859, October 11.—N° 2312.

CUNNINGHAM, Patrick Gregson.—(*Provisional protection only.*)—" *Improvements* in the construction of artificial teeth and

" gums." These are applying vulcanite in combination with a metal plate. A cast of the mouth is taken, from which a model is produced, and from it a mould, and "in this mould a plate " of gold or other suitable metal is struck up as heretofore," but in preference less in width "than is ordinarily employed." To this plate the teeth are affixed; "the plastic compound of " india-rubber is moulded thereon according to the model of the " mouth," and hardened by heat.

[Printed, 4*d*. No Drawings.]

A.D. 1859, October 18.—N° 2378.

WILLIAMSON, ALEXANDER WILLIAM.—"Improvements in " obtaining extracts from poppies." These are as follows:— " The poppies and water having been put into a closed vessel, " the atmospheric air is removed by an air pump or apparatus." " Heat is applied by steam or otherwise, and maintained for half an hour at about 212° Fahrenheit. The extract is afterwards evaporated in vacuo "at as low a temperature as can conveniently " be done."

[Printed, 4*d*. No Drawings.]

A.D. 1859, October 26.—N° 2443.

CLARK, WILLIAM.—(*A communication from Emile Muller.*)— " Improvements in the preparation and application of baths, or " bathing media, and in apparatus employed therein." These are a "system of baths, combined with their application chiefly " intended to economize the amount of liquid used to procure " new therapeutic effects." By this system "mineral baths, sea " water, whey, or other such like baths," "may be employed in " any locality with a few quarts." "The liquid is economized " by substituting aqueous precipitations similar to small rain, or " what is commonly known as Scotch mist, instead of the water " generally used in baths." "The subdivision of the liquid is " effected by ordinary means. The following are among the " methods employed:—First, by causing the liquid to enter " the bath in a rapid current of air, gas, or vapour; secondly, by " causing jets of water to impinge with force against hard surfaces; thirdly, by subjecting the liquid to centrifugal force; " fourthly, causing the liquid to pass through a filter. Any other " means of subdividing the liquid may be adopted, the water

" being always administered in the form of extremely small and " thick rain."

The bather is "in a closed box, made of or surrounded by non- " conducting materials," and the liquid is conveyed by one of the above means into the box, and several methods of application are described.

[Printed, 1*s*. Drawings.]

A.D. 1859, October 26.—N° 2449.

PRICHARD, JOHN LEWIS.—" A new method of relieving pain " in the human body." This "consists in the use of alleviative " drugs in combination with a battery to act upon the various " parts of the human body, wherein pain may be seated." "In " cases of rheumatism, paralysis, nervousness, indigestion, chronic " diseases, first stages of consumption, deficient circulation of the " blood, coldness of the extremities, and other local pains," " using such alleviative drugs as are well known in the profession, " such as opium, chlorate of potash, or other drug;" "said drugs " being thrown into the blood, or applied to the parts affected by " means of a battery or batteries, and insulated wire placed in " such a form as to aid the uniformity of the current, by which " means the fluid is applied in one continuous current."

[Printed, 4*d*. No Drawings.]

A.D. 1859, October 31.—N° 2482.

CHEVRIER, ANTOINE.—" Neutralizing the smell and savour of " all vegetable and animal substances without their being adulte- " rated, by the use of essences, of spirits, and aromatical pro- " ducts." To deoderize cod liver and other oils, preference is given to "mirbane, a pyrogenic essence produced by the distil- " lation of benzine." "Mirbane" is, however, an acrid substance but its "acridness must be made to disappear before it can be " used;" this is effected by the addition of "glucose, glycerine, " diastase, or dextrine," but glucose is preferred.

To disinfect sores "recourse should be had to, firstly, distilled " red laurel water, or water of bitter almonds;" secondly, "mir- " bane" in spring water. Balsam of copaiva is mixed with *glucose, or* with butter of cacao, by which means its acridness *is removed;* a few drops of chloride of iron added "before placing

" it in contact with the butter of cacao, contributes greatly to the " removal of its acridness."

[Printed, 4*d*. No Drawings.]

A.D. 1859, November 3.—N° 2499.

DELAVIER, ISIDORE FRANÇOIS.—" Improvements in coffee-" pots, tea-pots, and other culinary or pharmaceutical vessels of " the same nature." These consist in forming these utensils of an inner and outer vessel, " the space left open all round between " the two vessels being hermetically sealed up at the top; the " inner vessel is provided with a grate or perforated false bottom, " on which are laid the materials to be submitted to the action of " the liquid, which latter is put into the open space left between " the two vessels, in which open space are further situated two " bended tubes, provided at the highest part of their bends " with proper stop-cocks, the moveable key of which may be " introduced in their barrel, and worked from the outside of the " vessel," by which means the liquid menstruum is caused to fall " either with or without interruption on the substances con-" tained in the inner vessel, and to carry the said menstruum " back into the outer vessel without allowing the exterior air to " come in contact with the said substances and liquid before the " infusion, extract, or decoction is prepared." Heat is applied to the outer vessel by any suitable means.

[Printed, 8*d*. Drawing.]

A.D. 1859, November 8.—N° 2545.

CLARK, WILLIAM.—(*A communication from Victor Corne.*)—" A " compound applicable for the manufacture of manure, the pre-" servation and disinfection of organic matters, and for other " purposes." The applications of this compound which particularly refer to this subject, are " embalming bodies or for pre-" serving anatomical specimens;" and likewise " for curing " wounds, sores, and disinfection in cases of disease."

For embalming, &c., anhydrous plaster, coal tar, oxide of iron, chloride of sodium, all in certain proportions, are mixed with all or any of the following substances, namely, " alum, tar, " tannate, bark furnishing tannic acid, sumac, aromatic plants " containing essential oils, tannin, resins, resinous woods, refuse " vegetable coniferous plants, oderiferous waxes, essential oils of

" either vegetable, animal, or mineral origin, such as benzine, " benzoin, and other carbonated products, oxygenous acids, &c." Anhydrous " carbonate of lime, clay, marl, or earth," may be substituted for the anhydrous plaster. For curing wounds, &c., a compound of " pulverized anhydrous plaster and coal tar, mixed " together in eertain proportions," are spread every morning over the wound " " Any other inert porous matters may be substituted " for the plaster."

[Printed, 4*d.* No Drawings.]

A.D. 1859, December 1.—N° 2718.

MOSSELMAN, ALPHONSE. — (*Provisional protection only.*)— " An aromal electric girdle." This " girdle is intended to protect " those who wear it against sea sickness." " It is made of " Russian leather, and provided with an electro-galvanic battery, " composed of a copper box or case half filled with zinc filings, " into which two positive and negative electrodes enter, forming " both ends of a circuit of copper and zinc; flattened spiral wires " are lodged under the leather. For setting the said battery into " action, a few drops of sea water are introduced into the copper " case."

[Printed, 4*d.* No Drawings.]

A.D. 1859, December 8.—N° 2790.

MACINTOSH, JOHN. — " Improvements in setting artificial " teeth." These are, employing collodion. This material is applied " when in a fluid or soft state, so that when it hardens the " teeth may become securely imbedded in it." " A form or mould " is by preference employed to bring the mass of collodion in " which the teeth are set to the proper shape to fit the mouth. " Cotton or other fibre may be embedded in the collodion to in- " crease its toughness, and the outer surface or the whole of the " collodion may be colored to look like the natural gum." The mode of procedure is as follows:—From an impression in wax of the form, a mould in plaster is made, and from this again is obtained in plaster a copy of the original wax impression. On to this form is built up in wax or other material a thickness equal to what is required for the collodion setting, and the teeth are embedded in the wax " as they are to be in the collodion setting;" " when this is produced on the wax model, and while it is still on "the form, it is oiled all over, and a plaster cast is taken of it; "this, when set, is removed from the form, and the teeth will be "found firmly imbedded in it; the whole of the wax is then carefully removed." These two plaster forms, when put together, form a mould, and enclose between them a space corresponding in form with the collodion setting to be produced; these forms are placed in a metal box, and the collodion in a plastic state, mixed or otherwise, is pressed into the mould in the same manner "as in "filling a mould with the compound of india-rubber and sulphur." The mould is heated to about 200° F., and pressure applied, after which it is cooled. Plates of thin flexible setting are obtained much in the same way, and they are also cut from sheets of the material. "A block of collodion (mixed with fibre and "copal if considered desirable) is formed, and afterwards carved "out to the form desired, the teeth being fitted and fixed as when "sea-horse tooth is employed."

[Printed, 4*d*. No Drawings.]

A.D. 1859, December 23.—N° 2922.

MENNONS, Marc Antoine François.—(*A communication from Hippolyte F. P. Benoist.*)—"Improvements in voltaic batteries." These are said to be, first, "in the employment in "voltaic batteries of slightly soluble metallic salts."

Second. "In the combinations of battery apparatus in which "these salts are used."

A simple "voltaic arrangement, comprising these improvements," consists "of shallow capsules in zinc," &c., "tinned "inside, nested one within the other (without metallic contact), "and maintained in position by brackets fitted to a non-conducting support." On the "bottom of each of these capsules "is placed a layer of one of the slightly soluble metallic salts, "such as chloride or sulphate of lead," "over which is poured "any suitable exciting solution." The required number of these "cells being nested one within the other," "the battery is "completed by metallic conductors, soldered or otherwise, attached "to the first and last of the range." It is stated that "the form, "dimensions, and general arrangement of these elements may, "of course, be varied according to their intended applications," and several forms of such batteries are described, and "a miniature battery for medical and similar purposes," is described as follows:—"A vase of tinned copper or other suitable metal is

" closed by a lid " of the same material, and provided with an opening at the centre of the top; suspended in this vase is a disc of zinc by a rod of the same metal, "in which is fixed " a small tinned copper rod threaded at the top." " This copper " rod passes through a plate or socket of non-conducting matter " below the lid, and " screws into a similar plate above the lid." A small metallic capsule " charged with the lead salt is placed " at the bottom of each vase." " The contacts may be made " by metallic springs," or " by binding screws," communicating with the lid, and " the copper rod of the zinc plate."

[Printed, 8*d.* Drawing.]

A.D. 1859, December 28.—N° 2962.

ROSTAING, Charles Sylvester.—" Improvements in combining and mixing gutta percha with mineral and vegetable " substances, capable of altering its quality in such a manner as " to produce hard, resistent, unalterable, and imputrescible compounds diversely coloured." These are, first, the preliminary purification of gutta-percha by boiling in water, flatting into sheets, washing in cold water, and steeping or boiling " in a " decoction of radix saponaria, alba, or soap wort," &c.

Second. Boiling gutta percha in caustic alkali, &c.; also, the " manner of preparing or producing colors from oxides of zinc " (for mixing with gutta percha)," as follows :—The oxide of zinc is mixed with water, or a dilute mineral acid, and exposed " for several hours to a white red heat," after which it is " reduced to the state of an impalpable powder in a water mill, " and then dried and sieved."

Third. Forming " artificial silicate of zinc " as follows :—oxide of zinc and silica, or quartz, both in powder, are mixed together in certain proportions, and made into a paste, with a solution of chloride of zinc, and moulded into bricks, which are baked at a white red heat for some hours, after which they are reduced to a fine powder.

Fourth. " The mineral substance formed by the combination of " silica, alumina, and zinc," prepared by mixing kaolin and " oxide of zinc in certain proportions, and treating them as the " artificial silicate of zinc."

Fifth. " A third mineral combination composed of a mineral " *known* as talc or steatite (silicate of magnesia), rose-coloured " *by oxide of* cobalt."

Sixth. "A fourth mineral combination, formed by the mixture "of blende (native sulphuret of zinc) with kaolin or felspar;" also, a vegetable combination composed of tannin, gutta-percha, chloroform, benzoin, balsam of tolu, or essential oil; or "a com- "bination composed of gutta percha and catechu;" "camphene "or benzine may be added to facilitate the admixture."

Seventh. "The mixture of any or all results or products," "either separately or in further combination with gutta percha," "for any use or purpose to which such mixtures or combina- "tions may be applicable;" among these are named "dentistical "purposes," &c., &c.

[Printed, 1*s*. 4*d*. Drawings.]

1860.

A.D. 1860, January 2.—N° 4.

DEWAR, Henry Andrew.—"Improvements in moulding or "applying india-rubber as the basis of artificial teeth, and in "apparatus for the same." These are, first, "preparing the "mould for the reception of the india-rubber base of the teeth, "with gates, or inlet and outlet apertures," as follows:—A cast of the jaw to be fitted is taken in wax, and a model from this is made in plaster, and set in plaster "in the lower part of the flask, "all as in ordinary." On this cast a model of the vulcanite base to be produced is formed of wax alone. After fitting the teeth, the middle part of the flask is fixed in position, and two or more wires, in this case three, are placed "in contact with the wax at "one end, while the other ends project through holes in the "flask." The flask is now run full of plaster, and the upper part or top of the flask fixed. When dry, the wires are withdrawn, and the flask, inverted in a suitable receiver, is heated in an oven, "till all the wax runs out of the gates or holes "produced by withdrawing the wires."

Second. "Forcing and moulding," in this mould, "the india- "rubber material in a plastic state, by pressure and apparatus." This is effected "by means of a cylinder fitted with a piston "worked *by a screw*," &c.; the cylinder is heated by means of from a sitting "to that of a recumbent, or lying, or other pos-"ture." This is effected "by causing the seat, which is suspended "at the back or sides by hinges, or other flexible or other joints, "and supported in front by the leg-board, or upright bearer of "the said seat, to divide, separate, or come apart, or fall down in "the front, centre, or end, or otherwise." "This operation can "be effected by the hand in small carriages, and by means of a "rack, ratchet, or spur and pinion, or other machinery for adult "or invalid carriages." "It can also be accomplished by the "seat and legboard, and a portion of the back of the carriage "being made in one continuous jointed piece, and caused to rise "or fall, or move in a horizontal, or vertical, or angular posi-"tion." "When the carriage is not required for use out of "doors," the body may be detached from the under carriage, and removed indoors with the person in it; it can be used "as a "rocking-chair, or swing, or other source of amusement."

[Printed, 4d. No Drawings.]

A.D. 1860, February 7.—N° 322.

CHARTROULE, PAUL.—"Iodine inhaling means and apparatus "for medical purposes." This consists of what is called "the "iodometer." It consists of a cylindrical receiver of ivory containing a crystal tube, taper-ended, for leading the air towards the upper end of the iodine cylinder, enclosed in a small tube, and to which tube is attached a spiral little tube heated by a lamp, and "the air in passing through this tube becomes heated." There is "a capillary tube, which receives the iodine in small "cylinders, set in motion by means of a piston." "This "capillary tube has a graduated scale, the starting point of "which is indicated by a circular mark, fixed to the ivory re-"ceiver; there is a bent tube, terminated by an amber mouth-"piece," from "which the vapor of iodine is inhaled." "Iodized "cigarettes are ignited, and smoked in the same manner as "ordinary cigars."

[Printed, 4d. No Drawings.]

A.D. 1860, March 1.—N° 555.

[illegible], WILLIAM.—"Manufacturing granulated seidlitz powder." This "consists in dehydrating the carbonated alkalies of potash "and soda and mixing them with a certain proportion of acid."

also, "dehydrated sulphate of soda may be added or omitted." The whole is brought to a "state of partial fusion," and "passed "through a perforated apparatus for the purpose of granulation."

[Printed, 4*d*. No Drawings.]

A.D. 1860, March 2.—N° 582.

BABINGTON, BENJAMIN GUY.—(*Provisional protection only.*) —"Improvements in means or apparatus for protecting the "throat and chest from atmospheric influences, and which may "also be employed as a protection to the mouth." These are, "providing internal bodies of the desired shape, and by pre"ference of a material that will admit of folding for the pocket, "and then of readily resuming the desired form. Gutta percha, "or a compound thereof, or prepared india-rubber, answers well. Such body is coated externally and internally. Strings, bands, or clasps, "hold the same on the neck of the wearer."

[Printed, 4*d*. No Drawings.]

A.D. 1860, March 10.—N° 656.

JULLIENNE, MARIE JOSÉPHINE ELIZABETH.—"An im"proved bath belt to be applied in the bathing vessels, and in "electrical apparatus connected therewith." The belt is composed of a band of iron or steel, coated so as "not to be acted "upon by the water." It is covered with some material, and "has straps for attachment to the body of the bather." It is attached by a back piece to the sides of the bath by screws or otherwise. It has "braces for holding the bather, and a pillow "or cushion fixed to the back piece."

"A small board may be adapted to the apparatus, on which "may be placed different kinds of playthings for amusing a child." "The apparatus is further arranged so that electric shocks may "be communicated to the bather." If the apparatus is "to "furnish static electrical effects," "the metal in the belt should "be of magnetized steel, and if to furnish dynamic electricity it "should be of iron, steel, or any other conducting metal, which "is to be connected with a current from a chain or other pile "suitable for industrial purposes." A chain for this purpose is described as follows:—"Two blades, zinc and copper, are united "by solder throughout their length, and then divided so as to "*produce elements* formed of two metals, zinc and copper, which

"are connected afterwards end to end and chaplet-like, by con-
"ducting wires." "Such piles need be excited by either vinegar
"or other acid."

[Printed, 8*d*. Drawing.]

A.D. 1860, March 14.—N° 675.

HENRY, MICHAEL.—(*A communication from José Gallegos.*)—
"Improvements in the construction of artificial hands, feet, and
"limbs, or substitutes for natural hands, feet, and limbs, and parts
"thereof." These are, employing "spiral springs as motive
"agents, with which springs, pulleys, cords, or pulls and points
"of attachment may be combined." "The use of spiral springs
"as agents of impulsion is advantageous on account of their
"strength, sustained tenacity, and expansive elasticity of action,
"and also on account of their being graduated or regulated at
"pleasure; their power is very considerable in proportion to
"their weight and size." "As in the instance of the artificial
"arm, where motion is principally communicated by the other
"arm or the stump remaining, by means of a pulley and cord, so
"also the same advantages are obtained by the wearer's availing
"himself of the impulsive action of his leg, himself selecting the
"part or parts to which he finds it most convenient to attach
"the opposite ends of the cords that pass over intervening pulleys,
"and which cords may be of catgut, or of flexible material, so
"contrived that one may be more elastic than another, and
"corresponding to the pulleys, whether the latter are single,
"double, or compound; these being so combined as to increase
"or reduce the power and rapidity of action of the principal
"artificial movements. A ball-and-socket joint may be used at
"the wrist, whereby the auxiliary motions required at that part
"are more easily obtained."

[Printed, 1*s*. Drawings.]

A.D. 1860, April 20.—N° 995.

LUKYN, WILLIAM, the Elder. — "A method of attaching
"artificial or natural teeth on expanded or contracted frames."
This consists "of covering with artificial teeth the whole, in-
"cluding the bicuspids or part of the teeth in the front of the
"mouth, and continuing the same frame or frames when required

" to the back of the mouth for the purpose of mastication, and " attaching all deficiences of the front teeth on the same frame." " To keep the frame firm in the mouth, the usual method of " dentists can be resorted to, by attaching claws and other well " known appliances."

[Printed, 4*d*. No Drawings.]

A.D. 1860, April 21.—N° 998.

CLARK, William.—(*A communication from Pierre Hector Aubergier.*) — (*Provisional protection only.*) — " Improvements in " enclosing or covering opium and other matters." These are, covering it so as "the cake always keeps its form and loses no " moisture." " The cake is introduced in a round mould, open " on two sides. At the bottom of the mould is a moveable " plate," "above the cake is placed a second plate," " by means " of a screw the cake is pressed between the two plates; the " upper plate may be removed by means of a lever, the under " one is raised also, and the cake can be taken out of the mould " at pleasure." Trade marks are on the top and bottom plates.

[Printed, 4*d*. No Drawings.]

A.D. 1860, May 11.—N° 1160.

MACINTOSH, John. — (*Provisional protection only.*) — " Improvements in artificial gums, and setting and stopping teeth." These are, first, applying " a thick external coating of collodion, " coloured to look like the natural gums." In this way the " bases of the gum may consist " of glue, gelatine, wood, papier " maché, wire, ribbon, or any other suitable material."

Second, in " fixing artificial teeth," making " as large a channel " through the tooth as is consistent with strength, and making " the top and bottom of the orifice wider than its centre," by which means a larger quantity of collodion can be forced into the orifice. In some cases wire surrounded with collodion may be used, and also the teeth are undercut to receive a portion of the gum. Teeth are stopped by collodion or a compound of the same. Gums from dental rubber are placed in their models in a vessel filled with water and heated "to a temperature of about " 315° Fahrenheit."

[Printed, 4*d*. No Drawings.]

A.D. 1860, May 15.—Nº 1200.

JORDAN, Reuben Jacob.—“Improvements in pills.” These consist of pills made of the following ingredients, and coated rose pink by sugar of that colour:—“Gum gambogia,” “pulo rhæi optimus,” “pulo gum myrrh,” “sapo castile,” “pulo aloes Soce,” “pulo lingib optimus,” “pulo sum cardum.” These are mixed together in certain proportions “with syrup or other suitable matter to form a mass,” and made into pills which are coated with sugar of a rose pink color.”

In the complete Specification in place of rhæi is rhoci, and for cardum is cardium.

[Printed, 4*d.* No Drawings.]

A.D. 1860, May 29.—Nº 1318.

DUFOSSÉ, Eugène.—“A system of skeleton or framework with continuous free air currents, applicable to the construction and improvement of seats of any description, mattresses, saddles, and upholstery generally, with a view to render them ‘hygienic.’” This consists, first, in using (instead of cross rails, partitions, and springs) girths, string nets or thongs, or strips of sheet iron, or iron with which the framework or any other of the above applications is wrapped up, and the framework being divided into two parts by a hinge or joint in the middle, allowing it to be folded up in two or more portions that are more or less equal in size, so as to render its volume less, and make it more portable.

Second, “All the arrangements that may result from combining these above described, either with or without stuffing, and covered up with fabrics of any design and elegance.”

Third, “closing the mouth of the air channels by means of thin strips of wood, leather, trimmings, or any fabric whatever, or of metal perforated with holes, screwed, nailed, or glued on.”

Fourth, “any modifications in the upholstery part which may be found suitable for any of my arrangements of channels conveying continuous free air currents.

Fifth, “the totallity of the above-described system of framework or skeleton with continuous free air channels for the

" purpose of forming 'hygienic' seats, mattresses, and saddles
" which are not liable to heating the seated parts."

[Printed, 1*s*. Drawings.]

A.D. 1860, June 11.—N° 1428.

DE TIVOLI, Vital.—"Improvements in civil and military " ambulances." These are, first, "the construction of such " carriages for the service of civil ambulance."

Second, "their division in single compartments or cabins with " stretcher beds and bed chairs."

Third, "the special construction and application of the said " stretcher and chair beds." The stretcher is composed of a light elastic paillasse, with a small mattress bolster and pillow " covered with an impervious stuff, or simply air or water mattreses " and cushions on a plain frame." "The paillasse is fixed on a " frame having castors to fit on rails on the floor of the right " compartment." The left compartment has no rails on its floor, but has instead two lateral grooves to receive some castors on the sides of the chair bed. The chair bed is composed of "a seat, " back, and leg support, each formed by a distinct frame and " hinged one to another," and each with an elastic apparatus like the stretcher.

Fourth, "the special construction of military ambulance car- " riages with stretcher beds in single compartments, having " floors with rails or grooves, and slightly inclined towards a " point where is a little gutter for the descent of the liquids," &c.

Fifth, "the addition of a pharmacy magazine in the same " carriage where the invalids lie, and besides the railings on the " top to maintain medical and surgical chests, arms, and other " effects."

Sixth, "the arrangement of having so many as six beds in the " heavy, and four in the light field ambulance," &c.

Seventh, "the application of this system of beds and chairs " to railway carriages for the conveyance of civil and military " invalids."

[Printed, 10*d*. Drawing.]

A.D. 1860, June 26.—N° 1549.

CARTWRIGHT, Matthew.—"Improvements in the manufac- " ture of mouthpieces for dental and other purposes." These are, protecting the surface of vulcanite mouthpieces "by a thin coating

" of gold, platina, or tin foil." This is effected by "lining the " mould when prepared for the reception of the vulcanite with " gold leaf, gold foil, or crystal gold, platina leaf, or tin foil." " The metallic surfaces may be thickened by electro-plating " them in gold, if it be thought desirable."

[Printed, 4*d*. No Drawings.]

A.D. 1860, July 17.—N° 1732.

ESKELL, Abraham.—" Improvements in beds or bases for " artificial teeth." These are as follows:—"The upper portion " of the bed to which the teeth are attached is formed of metal, " as has heretofore been done, but in place of the under side of " the metal bed being shaped so as exactly to fit the gums, the " under side is made hollow so as to receive a filling piece of " gutta percha, vulcanite, amber, tortoiseshell, ivory, or any " substance capable of being readily moulded to the form of the " gums." " When any change takes place in the form of the " mouth," this "filling piece may be removed, and a fresh one " formed to the shape of the gums inserted in the hollow of the " bed, so that a fresh set of teeth would not be required."

[Printed, 6*d*. Drawing.]

A.D. 1860, July 20.—N° 1764.

GUFFROY, Charles Constant Joseph.—(*A communication from Augustin Joseph Despinoy.*)—" Improvements in preparing " the livers of salt water fish." These are, obtaining from them " a new substance, being a concentrated medicinal extract." The livers of the cod fish, squalus, thornback, ray, &c., as fresh as possible, are heated with stirring over a slow fire until they become a pulpy mass. This mass is thrown upon a sieve, " which " retains the solid residue, and allows the liquid, which is composed of oil and water, to pass." On settling, the oil floats on the surface and is removed, the watery liquid is evaporated. 100 lbs. of liquid yields from 10 to 12 lbs. extract, which can be formed into pills.

[Printed, 4*d*. No Drawings.]

A.D. 1860, August 3.—N° 1880.

SKIPTON, Samuel Stacy.—"An improved splint for gun " shot and other compound fractures of the limbs." This consists

" of transverse strips, which, placed side by side, form the shape " of the required splint, and which transverse strips slide on one " or more longitudinal bars at their back to retain them in their " places, the terminal strips being fixed by rivets or screws to " each longitudinal bar." They are made of any suitable material. By this arrangement "the wound may be left exposed " for the application of the necessary dressings while the splint " remains bound on the limb."

[Printed, 6*d*. Drawing.]

A.D. 1869, August 24.—N° 2046.

KERSHAW, George.—" Improvements in the construction of " medico-electric surfaces." These are, combining "to water-" proof or other suitable fabrics, metallic surfaces composed of " discs or pieces of positive and negative metals (zinc and copper) " which overlap one the other, and are in metallic contact. These " discs or pieces may be disposed in a line to form a metallic " band, which is to be metallically connected at its ends and worn " round an arm or leg affected by paralysis or slight symptoms " akin thereto; or the discs "may be arranged in the form of a " circle, oval," &c.

[Printed, 6*d*. Drawing.]

A.D. 1860, September 8.—N° 2173.

CROSS, Peter Richard.—" Improvements in means or apparatus to give protection to the mouth and nostrils in respiration, and to the throat and chest against the injurious effects of " atmospheric influences." These "relate to a combined apparatus adapted to enclose the mouth, and if desired also the " nostrils, as well as to enclose the chin and throat, and to cover " the chest." "The part enclosing the mouth and nostrils is " formed as ordinary respirators are;" "the part giving protection to the throat is connected with the above by another " enclosing the chin." These parts, by preference, are made with " an internal body of gutta percha, or a compound thereof, or " prepared india-rubber, moulded to the desired shape and covered " with any suitable material." "From the throat the apparatus " descends in width and depth adapted to protect the chest, and " to give warmth thereto by the application of suitable padding."

[Printed, 10*d*. Drawing.]

A.D. 1860, September 12.—N° 2201.

MASSEY, WILLIAM.—(*Provisional protection only.*)—" Improve-" ments in the manufacture of artificial mineral teeth, and the " means whereby the same may be more securely attached to arti-" ficial gums and palates formed of vulcanite or other similar " materials." These are " in place of the projection on the inside " of the cutting or grinding end of the tooth being formed at a " right angle or bevelled outwards, as now practised, for conve-" nience in drawing from the mould," the teeth " are formed " with an undercut, or semi-dovetail or V-slot into which the " vulcanite or other material forming the palate is worked," and substituting for the wire pins now used staples or eyes projecting " from the flat part of the minor surface of the tooth which is in " contact with the artificial gum;" or forming the pins with heads.

[Printed, 4*d*. No Drawings.]

A.D. 1860, September 15.—N° 2243.

HORSEY, JAMES. — " Improvements in india-rubber teats." These are, first, " shaping india-rubber teats so as to form a " nipple." This is effected by rolling " up the ring on the bot-" tom edge towards the top, and have it so rolled for about ten " hours and upwards;" " then unrolling it, when an inden-" tation will appear in the teat resembling the form of a natural " nipple," after which it is vulcanized.

Second, " strengthening india-rubber teats by means of a " lining or coating " of india-rubber; cups, tubes, or shields, are attached as required to these teats.

[Printed, 6*d*. Drawing.]

A.D. 1860, September 15.—N° 2249.

BARNWELL, STEPHEN, and ROLLASON, ALEXANDER.—" Improvements in combining and mixing certain solutions of " pyroxylene with animal, mineral, and vegetable substances, by " which its quality is altered in such manner as to produce hard, " resistent, adhesive, plastic or resilient compounds and articles " unalterable in their nature, and varied in colour, which said " compounds in a state of solution may also be advantageously " employed as paints or varnish." These are, first, " the com-

" bining and mixing certain solutions of pyroxylene with animal " mineral, and vegetable substances, &c.

Second, "The manufacture of the peculiar solutions of pyroxy-" lene," and the making of pyroxylene, and in utilizing "the waste " acids," and "employing them with great economy." In manufacturing pyroxylene, "in place of cotton wool, common rags of " any description are preferred;" and "after twenty or twenty-" four hours' contact with the acids, the acids may be drawn off " free from any suspended pyroxylene." The acids are collected and analyzed, and the loss of strength "supplied by the introduc-" tion of very strong fresh acids in the requisite proportions, by " which they will be restored to their original strength, when they " may be re-used." It is preferred to use this description of pyroxylene though any will answer. "Fibrous and other matters containing cellulose" are treated "with mixed acids of such modi-" fied strength and temperature that they will be only partly " converted," and "only partly soluble in the solvents of pyroxy-" lene." In all cases the pyroxylene is washed from acid and dried. Pyroxylene is dissolved "in any of its known solvents," and there are added thereto "oils, animal, vegetable, or mineral, " varying in their nature and their action, with pyroxylene, select-" ing those to suit any particular views" entertained "relative to " the subsequent use of the compound." To this is added, if desirable, gums, resins, "oxidisable salts, such as oxide of man-" ganese or oxide of copper as coloring agents, any suitable coloring; "chloride of calcium and iodile of cadmium are useful " when articles of a non-inflammable nature are to be produced," animal matters, as "glue, gelatine, or wool flock," or such like. Among the numerous applications of these compounds are "for " the purposes of dentistry," for surgical uses, such as nipples, " tubes, splints, and skins," "sticking plaister and surgical instru-" ments."

The proportions of the ingredients and the manipulations " vary as the nature of the article to be produced."

[Printed, 6*d*. No Drawings.]

A.D. 1860, September 17.—N° 2252.

STEVENS, **Charles**.—(*A communication from Baudouin and Guérin de Tencin.*)—(*Provisional protection only.*)—"A new " medico-chirurgical bleeding instrument." This consists of a piston working in a hollow case; to the bottom of this piston is

attached a metallic disc, furnished with thirty needles, "pro-
" jecting to a length of about one-sixth of an inch," and plated or magnetized, &c., "to prevent oxidation." At the top of the piston is a button, by pressing which the piston is moved, &c., &c.

[Printed, 4d. No Drawings.]

A.D. 1860, September 25.—Nº 2329.

COLLIER, Edward.—(*Provisional protection only.*)—"Im-
" provements in respirators." These are, manufacturing "re-
" spirators composed of thin perforated plates of aluminium, as
" also perforated plates of tin, silver, and zinc, in the proportions
" of about three of tin, two of silver, and one of zinc." "The
" aluminium are combined with plates of the above alloy, both
" studded with minute perforations."

[Printed, 4d. No Drawings.]

A.D. 1860, September 28.—Nº 2353.

GILBEE, Henry.—(*A communication from Noel Pascal.*)—(*Provisional protection only.*)—"An improved medicament to prevent
" and cure venereal diseases." This consists as follows:—Alcohol,
" mikania guaco, and guaco, or comocladia integrifolia," in certain proportions, are macerated together for "about one month," when a certain quantity of the ashes of these two plants are added. After filtering, a small quantity of perchloride of iron is added, and "aromatize with the essences of rosemary or lavender,
" and dilute with water, according to the required application."

[Printed, 4d. No Drawings.]

A.D. 1860, October 8.—Nº 2438.

CALKIN, Joseph.—"An improved apparatus for protecting the
" upper portion of the face from the inclemency of the weather,
" dust, or otherwise." This consists "of a metallic frame in the
" form of the ordinary shade, so as to cover the eyes, and extend
" from the forehead down to the nose, provided with an inner
" curved wire, fitting closely to the face, the whole of which
" is covered" with a transparent material, and "connected at the
upper portion to a clip spring, for enabling the shade to
e readily fitted," and "also to leave an opening in the upper
rtion of the same for the escape of the heated air."

Drawing.]

A.D. 1860, October 26.—N° 2614.

TIERNAN, Robert. — (*Provisional protection only.*) — "Im-
" provements applicable to infants' and invalids' feeding bottles,
" and other purposes." These consist "in applying to suction
" tubes or their equivalent, used to draw liquid food from the
" reservoir or supply vessel, a lift valve or valves, or other
" mechanical equivalent, to prevent the food returning into the
" vessel from which it is being drawn." It is preferred "to use
" the artificial nipples formed of india-rubber, and perforated by
" what are termed leech bite holes."

[Printed, 4*d*. No Drawings.]

A.D. 1860, October 31.—N° 2661.

GHISLIN, Thomas Goulston.—(*Provisional protection only.*)
—"Preparing, applying, and adapting certain articles of vege-
" table production, called eiklonia buccinalis, proteaceæ, juncus,
" serratus, juncus trista, and amaryllideæ, to further new purposes
" of manufacture." No mode of preparation of either of these
articles is given, but they are said to be applicable to a vast
number of purposes, more especially the first-named plant, which,
among other things, it is said, is to be used in "aurist, surgical,
" and optical " instruments.

It is stated that "protection has been already obtained,"
N° 1049, A.D. 1857, for "these plants, and for certain uses
" and purposes ;" but the purposes now "mentioned are new
" discoveries."

[Printed, 4*d*. No Drawings.]

A.D. 1860, November 16.—N° 2820.

WELTON, Thomas, and MONCKTON, Edward Henry Cradock.—"Improvements in the application of electricity or
" magnetism to the human body, for the relief of pain and cure
" of disease." These are, placing "the armature or medium of
" completing the magnetic or electric current at the back of the
" part of the body affected, both body and armature being
" insulated from the ground " by glass or otherwise, "such as
" forming the back of a chair, or any or various parts of a couch,
" or bed of metal," or, "on a wall." "The strength of the
" current may be graduated by varying the distance of the
" magnet " from the body, and by using a more or less powerful
one, &c.

[Printed, 4*d*. No Drawing.]

A.D. 1860, December 3.—N° 2962.

BARKER, William Robert.—(*Provisional protection only.*)— " Improvements in bottles for medicines and poisons." These are, constructing " the body of the bottle with an opening at the " top part," into which the neck is inserted like a stopper. The neck is in the shape of an oblong cup or receiver, with a small hole " at the bottom and one at the side, through which the " liquid has to pass." " The top part of this neck piece is formed " with a spout and stopper."

[Printed, 4*d.* No Drawings.]

A.D. 1860, December 6.—N° 2990.

PRATT, Joseph Francis.—(*Provisional protection only.*)— " Improvements in instruments for receiving and transmitting " sound, particularly adapted to the relief of deafness." These are employing a hollow vessel of a bell or trumpet form, having " two curved or bent tubes passing out of the same," to which " are attached elastic tubes with end pieces, which either enter or cover the ears; also placing within such instruments " a water " cushion, metallic spring, or other vibrating substance, for the " purpose of modifying and softening the sound transmitted to " the ears."

[Printed, 4*d.* No Drawings.]

A.D. 1860, December 24.—N° 3157.

FANSHAWE, John Americus, and JAQUES, James Archibald.—" Improvements in the manufacture of fabrics, with " rubbing or friction surfaces." These consist in introducing into the fabric as warp threads, distended strands of vulcanized india-rubber, covered or otherwise, so that the strands on being allowed to contract " produced a corrugated or looped surface," and sometimes introducing or weaving into the fabric tufts, &c. of horse hair. These fabrics are used for " towelling, or as medical " rubbers."

[Printed, 6*d.* Drawing.]

A.D. 1860, December 26.—N° 3164.

JOHNSON, John Henry.—(*A communication from Charles Grafton Page.*)—" Improvements in instruments for assisting " the sense of hearing." These consist " in the employment of " simple deflectors of sound, in the form of open mouthed cham-

" bers, by preference of a curved and conic section, applied in any " convenient manner to the exterior of the ears, so as to deflect " the sound into the ear passage." "These deflectors may be " fitted to a spring bow placed over the top of the head, or " they may be made to form part of a hat, bonnet, or other " head dress."

[Printed, 8*d*. Drawing.]

1861.

A.D. 1861, January 15.—N° 115.

DAVIES, George.—(*A communication from Andre Nadal.—(Provisional protection only.*)—" Improvements in the manufacture of " blades for knives, razors, swords, bayonets, and other similar " articles, and in apparatus to be used in such manufacture." These are "obtained by the use of a rolling mill" constructed of " two cylinders grooved or divided by zones, alternately projecting " and receding, are geared together, so that the projecting parts " of the one correspond exactly with the recessed parts on the " other." "On each of these zones or grooves, half on one, " and half on the other, are impressed or recessed, the forms of " the different blades or other articles (lancets) to be produced in " such a manner as that they shall strictly correspond."

[Printed, 4*d*. No Drawings.]

A.D. 1861, February 14.—N° 378.

RIMMEL, Eugene.—" A new process for impregnating the " atmosphere with perfuming or purifying vapours." A liquid is prepared composed of essential oils and alcohol, or of perfumed alcohol alone, mixed with about ten times its weight of water distilled from flowers, such as rose water. This mixture, after shaking, is poured "into an evaporating vessel or pan of any " description, under which is a spirit lamp, or any other heating " apparatus." "The vapourizer can also be made in a modified " form with a water bath containing plain or perfumed water " and a moveable upper basin containing perfumes, with a per- " forated curved pipe or worm conveying the steam from the

" water bath into the upper basin, where it causes the fragrant " molecules to be volatilized."

[Printed, 6*d*. Drawing.]

A.D. 1861, February 15.—N° 383.

PRENSLAN, Moses Abraham.—" Improved preparations for " the cure of and prevention of toothache, and the preservation of " teeth." These are, first, " oil of paper," alone, " applied with " cotton, or by any of the other known methods." " Oil of " paper is best obtained by laying a quantity of paper on a flat " surface, igniting it, and allowing it to burn out; on removing " the ashes the oil will be found adhering to the surface of the " vessel."

Second, " oil of paper, obtained as above described, sulphur, " rock salt, orris root, and wood ashes mixed together." " The " compound so prepared being used as a tooth powder." The proportions in which these substances are mixed are given.

[Printed, 4*d*. No Drawings.]

A.D. 1861, February 22.—N° 439.

LANG, Benoit. — " Improvements in apparatus for feeding " infants and invalids." These consist in placing a valve " in " the tube to which the teat is attached, so that when the teat " and tube are once charged or filled, the milk or other liquid " is retained therein." " The valve is of any suitable form or " construction," a hollow or truncated cone, or a lip or flap valve, " elastic or non-elastic, &c., &c.

[Printed, 4*d*. No Drawings.]

A.D. 1861, February 26.—N° 490.

DAVIES, George.—(*A communication from Charles Augustin de Beriot.*)—" Improvements in mechanical beds for invalids, appli- " cable also to tables for anatomical or surgical operations." These are as follows :—" The bedstead is divided into three dis- " tinct parts," namely, " a fixed or immoveable part at the centre, " and a moveable part at each end, which latter parts are moved " simultaneously by a lever, the part at the head rising, and the " part at the foot lowering, and vice versa. When it is desirable " to fix the bed in any position assumed by the invalid, this is " done by means of a cord fixed to the head of the bed passing

" over a pulley, and furnished with several rings, one of which is " hooked on to a fixed point." The two moving parts of the frame are connected together by levers, " so that they shall balance " each other and move simultaneously when the cord is pulled, " and in providing the levers connected to the foot piece with " hinges, so that, when desired, the foot piece can by slight " pressure (moving the hinges), be inclined without raising the " head or body."

A modification of the same arrangement is " applicable to " operating tables for surgical or anatomical purposes."

[Printed, 10*d*. Drawing.]

A.D. 1861, February 26.—N° 491.

TIERNAN, Robert.—" An improved apparatus for drawing " liquid substances from vessels containing the same." This consists in combining with such vessels a valve or valves with " a flexible teat pierced with leech-bite apertures." " The valve " allows of no return through it," and may be secured close to the teat, or in a cap fitting air-tight over the neck of the bottle, or in a cup on the tube at the bottom of the feeding bottle, a flap valve and spherical valves are employed.

[Printed, 10*d*. Drawing.]

A.D. 1861, February 27.—N° 502.

FOVEAUX, Henry Joseph Francis Hubert.—(*Provisional protection only.*)—" Improvements in specula and in plugs used " in connection therewith." These are, first, " in dilating the " speculum," by " uniting the moveable to the fixed blade by a " joint placed some distance above the base of the blades, and in " acting directly upon the lower end of the moveable blade by a " screw."

Second, employing " an india-rubber or other suitable elastic " tube or cover for the outside of the speculum," to prevent " the parts falling into the space formed by the separation of " the blades."

Third, surrounding " the whole or part of the upper portion of " the plug with an air chamber, which is so arranged as to cover " the top edges of the speculum. By letting out the air through " a tube extanding to the base or beyond the instrument the " plug can be withdrawn."

[Printed, 4*d*. No Drawings.]

A.D. 1861, March 2.—N° 537.

STEVENS, Charles.—(*A communication from Marc Pène.*)—" An ointment for the cure of sores." This consists of litharge, strong vinegar, and olive oil, compounded together in certain proportions and manner. It is spread on absorbent paper " cut " the size of the sore."

[Printed, *4d.* No Drawings.]

A.D. 1861, March 5.—N° 567.

JOHNSON, John Henry. — (*A communication from Edmond Hiffelsheim, Gustave Hagen, and Paul Baudet.* — (*Provisional protection only.*)—" Improvements in apparatus for administering " medicated and voltaic baths." A bath resembling in shape the human form is lined with " gutta percha or other non-con- " ductor of electricity," having inside an adjustment so as to allow of the head being considerably submerged. " One pole of " the battery is connected by a submerged plate with the water " of the bath, whilst a wire connected with the other pole, and " provided with a suitable knob or handle held in the hand of " the patient, completes the circuit." There are suitable arm-rests or supports, and instruments for measuring the electric current.

[Printed, *4d.* No Drawings.]

A.D. 1861, March 16.—N° 669.

PRINCE, Alexandre.—(*A communication from Julius Imme.*)—" An improved electro-galvanic friction brush." This consists as follows: — A strip of leather, bent into a circular form, has a number of pins of silver plated wire inserted in it in close rows; at the back of the leather is placed a curved zinc plate in contact with the heads of the pins, and the whole is secured in a suitable frame, the ends of the bent zinc plate rest upon a plain polished copper plate which is fastened in the frame; " beneath this is " a piece of felted cloth, succeeding which is a polished zinc " plate, then follows another copper plate, and again another " piece of cloth, and, lastly, a sheet of zinc." " The felted cloths " are to be taken out of the frame and dipped into salt water; " they are then replaced with the plates in the order before " mentioned, when the galvanic current will pass through the " *curved zinc* plate into the pins."

[*Printed, 6d.* Drawing.]

A.D. 1861, March 19.—N° 692.

WILSON, George.—"Improvements in glass stoppers, appli-" cable to feeding bottles, retorts, and other vessels." These are, constructing a hollow glass stopper, which, without removal from its seat, shall provide a passage for the discharge or withdrawal of the contents of the vessel to which it is applied, and by receiving a slight axial movement in its seat shall effectually close that passage. "In feeding bottles" moulding the neck with lateral projections or internal recesses at opposite sides of the neck. In this instance forming "one passage only in the side of the " stopper, the other being made through the centre of the stop-" per." The stopper is blown "hollow with a closed bottom end, " and with an upper end shaped to receive an artificial teat. " On one side of the stopper near the bottom end is a round " projection, which, on grinding the stopper to fit its seat is " formed into a lateral hole communicating with the central passage of the stopper." And when, therefore, the hole is brought into coincidence with the recess in the neck of the bottle a discharge passage will be opened up, "and an air passage at the same time." For retorts or vessels not requiring the access of air " the stopper is not chancelled on its periphery, but has merely " the lateral hole."

[Printed, 6*d*. Drawing.]

A.D. 1861, March 20.—N° 697.

BROOMAN, Richard Archibald.—(*A communication from Corneille Lambert Charles Casimir Gobert.*)—(*Provisional protection only.*)—"Improvements in preparing caoutchouc, adapted " especially to dental purposes." These are, in reducing or toning "down the red in the caoutchouc." The red caoutchouc is dissolved in a solvent and treated for the above purpose with one of the following substances, namely, sulphate of baryta, of " manganese, of strontian, of antimony, calcined alumina, cal-" cined or precipitated silex, phosphate of lime, or carbonate of " baryta," "alone or mixed with oxide of zinc." The dental piece heated for three-quarters of an hour from "300 to about " 350° Fahr.," will have acquired the necessary hardness. One hour and a quarter being required for "caoutchouc prepared in " the ordinary manner."

The flesh color is improved by "exposing the article either " directly or in an alcoholic bath to solar rays."

[Printed, 4*d*. No Drawings.]

A.D. 1861, March 25.—N° 752.

BENTLEY, Thomas. — (*Provisional protection only.*) — " Improvements in making up or packing charges or small quantities of gunpowder, drugs, or other articles." These are as follows : — An outer case is made to contain the number of charges required, and a thin cover or partition is placed over each charge, " and secured in position so as to form a division ;" each cover may be withdrawn by a string or otherwise. " In " place of forming the cells or compartments of each case or " packet one above the other," " they may be arranged side by " side and of different capacities."

[Printed, 4*d*. No Drawings.]

A.D. 1861, March 26.—N° 761.

SAVORY, John, and BARKER, William Robert. — (*Provisional protection only.*)—" An improved douche for the ear and " other parts of the human body." This consists of " a glass " cup of suitable shape, within which is a metallic pipe to pass " into the ear ; or when required for washing or bathing external " wounds a perforated rose is to be substituted for the pipe. A " flexible tube is attached to the bottom of the glass cup, to the " other end of which tube is secured a kind of pump, which is " caused to act by means of an india-rubber ball, which when " pressed drives the fluid up the flexible tube and out of the rose " or pipe, and when expanded draws fresh liquor up into the ball " the fluid being prevented returning into the vessel from which " it is taken by ball valves."

[Printed, 4*d*. No Drawings.]

A.D. 1861, March 30.—N° 781.

FIELD, James John. — (*Provisional protection only.*) — " Improvements in apparatus for evaporating in vacuo." " These " consist in refrigerating the cover, head, or upper part of the " vacuum pan so as to keep the portion of the internal surface of " the apparatus sufficiently cooled to condense the vapor arising " from the fluid operated upon," or an arrangement of surface condenser, either for or in addition to the above. The fluid condensed "is prevented from returning to that operated upon "in the lower part of the apparatus by one or more internal "channels or gutters;" from thence it is carried by pipes into an exhausted receiver. This mode of operating is advantageous in "the preparation of medical extracts."

[Printed, 4*d*. No Drawings.]

A.D. 1861, March 30.—N° 788.

NAPIER, WILLIAM DONALD.—"Improvements in the manu-"facture of rubbers for the human teeth and gums." These are, "in place of producing bristle-like points on a hard bed," producing rubbers "consisting of the soft and permanently elastic "compound of india-rubber and sulphur," "in contradistinc-"tion to those hard compounds of india-rubber which resemble "horn," &c. "In making rubbers, vulcanized india-rubber is "used in constructing a pointed or edged surface for cleaning the "teeth, a plain or undulating surface for rubbing the gums, and "a surface of either large or small corrugations for the purpose "of rubbing both teeth and gums."

[Printed, 6*d*. Drawing.]

A.D. 1861, April 6.—N° 853.

GHISLIN, THOMAS GOULSTON.—(*Letters Patent void for want of Final Specification.*)—"Preparing, applying, and adapting cer-"tain vegetable productions called eiklonia buccinalis, porteaceæ, "juncus serratus, juncus trista, and armyllideæ, to further new "purposes of manufacture, and certain modes to effect the same."

This resembles closely what is described in N° 2661, 1860, to which reference is made, p. 266.

[Printed, 4*d*. No Drawings.]

A.D. 1861, April 15.—N° 925.

FURLEY, ROBERT CHARLES.—(*Provisional protection only.*)—"Rendering pills tasteless by means of a coating of albumen." The albumen may be obtained from any source.

[Printed, 4*d*. No Drawings.]

A.D. 1861, April 17.—N° 937.

JENKINS, WILLIAM.—"Improvements in medicated belts or "bands for the alleviation of pain in or prevention of cholera,

" and for the prevention or cure of pulmonary or other com-" plaints." These are as follows:—The leather of the shape required is coated with Venice turpentine, "and oil or spirit " of turpentine is then applied with a brush or otherwise, and " over that a coating of calcined borax, finely pulverized, is " sifted thereon, so as to fix the previously prepared surface," and cover the leather with cloth.

[Printed, 4*d.* No Drawings.]

A.D. 1861, May 2.—Nº 1100.

JORDAN, Lewis Jacob.—(*Provisional protection refused.*)—" An aphrodision phosphorized nervine tonic." This is composed of "hypophosphite of iron (moist)," "hypophosphorus acid," and " pure quinæ (quinine)," and sugar and distilled water, all in certain proportions. "Mix and dissolve the sugar by the " application of heat, and flavour with vanillæ, orange, or other " flavouring material." The processes to prepare the ingredients of which the tonic is composed are given.

[Printed, 4*d.* No Drawings.]

A.D. 1861, May 4.—Nº 1126.

PALMER, William.—(*Provisional protection only.*)—"Im-" provements in apparatus for facilitating the imbibing of " liquids." These are, adapting to any vessel for liquids a flexible tube, "with a suitable mouth-piece and stopcock," so as to avoid raising the vessel to the mouth.

[Printed, 4*d.* No Drawings.]

A.D. 1861, May 25.—Nº 1322.

MONCKTON, Edward Henry Cradock.—"Improvements " in obtaining and applying magnetic motive power, which in-" vention is also applicable to other useful purposes." This invention contemplates "the employment of the surplus or in-" duced magnetic currents obtained" for, among other things, the "cure of disease."

These are, first, "obtaining motive power through the agency " of positive or negative electric currents however derived, by " causing the said electric currents to be diverged at certain " points by the introduction of suitable mediums" "at such " times as the electric currents are made to pass near each other."

Second, manufacturing magnets "for the above or other useful "purposes by casting fusad steel," then "hardening, magnetising, "and preparing" them like the common magnet.

Third, "communicating the magnetic power to hardened steel," "so as to render it uniformly magnetic, as also magnetic in a "compound manner by placing a ring of hardened steel before "the poles of a powerful electro or other magnet, the said ring "being placed vertically and the magnet horizontally, in which "position either the ring or magnet is caused to revolve till the "former is sufficiently charged; it should then be withdrawn in "a straight line, still keeping up the revolution and observing "the same relative positions."

Fourth, "in tapering the ends or poles of magnets in order to "concentrate their magnetism, the tapering being either wedge-"shaped or pointed, and the ends curved in any required "direction."

Fifth, "in the employment of tapered magnets for the produc-"tion of motive power, or where intense magnetism is required "for other purposes."

Sixth, "in the employment of electric currents induced by the "aforesaid means for other useful purposes, such as lighting, "heating, propulsion, electro-plating, telegraphing, the cure of "disease, the production of chemical compositions and decompo-"sitions, protection of property, and to the arts and sciences "generally."

Seventh, "in the combination of any or all of the aforesaid "principles, with or without the use of galvanic batteries."

[Printed 4*d*. No Drawings.]

A.D. 1861, June 12.—N° 1500.

DAUNCEY, John Albert.—"Improvements in apparatus for "supplying liquid nourishment to infants and invalids, and "in the application of such improvements to the feeding of "animals." These are, first, "the use of a jointed external "tube, instead of a continuous length, as the sections are more "readily cleaned."

Second. "The method of effecting the junctures of such sections "or pieces by means of the conical or double conical union "joints."

Third. "The use of an elastic internal tube, having a weight at "its lowest extremity," so as to keep it always in the liquid, instead of a rigid tube.

Fourth. The "construction and general arrangement of apparatus for feeding lambs, calves," &c. This consists "of a "flexible vessel above the receptacle of the feeding liquid," "either suspended by springs in a framing or secured by means "of a flexible washer on to the lower vessel." "The teats are "placed in the sides of the upper or flexible vessel, and communicate with the liquid" by jointed tubes.

[Printed, 10*d*. Drawing.]

A.D. 1861, July 3.—N° 1692.

JOLLEY, Richard.—(*Provisional protection only.*)—"An improved apparatus for heating, cooling, or drying, infusing, "extracting, or absorbing vapours and gases, for manufacturing, "medical, or domestic purposes, and for preserving liquids or "solids, alimentary or otherwise." This consists of an outer vessel of "any shape or size," fixed or otherwise, made of non-conducting material. "Within the top, or any other part of this "enclosure, is fitted a vessel or vessels provided with pipes, "traps, and drains," &c.

[Printed, 4*d*. No Drawings.]

A.D. 1861, July 27.—N° 1885.

ROBERTSON, James.—"Improvements in apparatus for the "treatment of bodily pain with hot water, steam, hot air, and "the like." These consists in vessels, "of which the inner vessel "is so formed and placed that there is a vacant space between it "and the outer vessel at the bottom and sides," and "the spaces, "at the top between the two vessels is covered in with some "water-tight material." The mode of using this apparatus is to place such part of the person as is afflicted by any of the diseases previously alluded to, in the inner vessel, and to fill the space between the two vessels with hot water, by means of an orifice at the top, fitted with a funnel. An orifice at the bottom with a cock discharges the water from "between the two vessels." "The shape and dimensions of the apparatus" will depend upon the part, and the extent of the application.

[Printed, 10*d*. Drawing.]

A.D. 1861, July 29.—N° 1892.

GUFFROY, Charles Constant Joseph.—"Improvements "*in preparing* medicinal substances and compounds from the

" livers of cod and other salt water fish." These are, instead of evaporating down the watery liquid remaining after the extraction of the oil from the livers of fish, as described in No. 1764, A.D. 1860, after separating the albumen, distilled water is added, and syrup. The watery liquid may be concentrated and taken in capsules, or dissolved in wine. It may be mixed with oil. It is treated with alcohol, and the precipitate thus obtained is treated in several ways.

[Printed, 4*d*. No Drawings.]

A.D. 1861, August 3.—Nº 1934.

PRINCE, Alexander.—(*A communication from John Mittelhaus.*)—" Improvements in palate and tooth plates for dental " purposes." These are as follows :—The " air is made use of " chiefly to form the organs of fastness or security to the plates, " or out of the pituitary membrane, by causing portions thereof " to pass through holes formed in the plates, thus fastening the " same by means of button-like protuberances of the pituitary " membrane, which are necessarily the result of the application to " the pituitary membrane of those plates so provided with holes." " This fact renders the pressure of the air afterwards " of " little " consequence."

[Printed, 6*d*. Drawing.]

A.D. 1861, August 5.—Nº 1940.

FITCH, Samuel Sheldon—(*Provisional protection only.*)— " An improved chest expander." This consist of a back piece of some elastic material, " fitting to the back, and extending from " the neck as low as the hips of the person to which the expander " is applied, of suitable form for the purpose." Attached to the lower part of this back piece " is a belt encircling the abdomen " for securing the expander to the waist of the wearer." " On " each side of the upper part of the elastic back piece " are elastic straps which are passed over the shoulders, and returning under the arms are secured " to the back piece."

[Printed 4*d*. No Drawings.]

A.D. 1861, August 6.—Nº 1947.

MENNONS, Marc Antoine François.—(*A communication from Jean Pierre Tajan.*)—" An improved odontalgic elixer." This is made as follows : — " Cochlearia, millfoil, pulverized

" cloves, pulverized cinnamon, pulverized cochineal, and brandy, or " any other alcoholic spirlt," all in certain proportions, are mixed together, and " the mass is left to infuse for fifteen days, after " which it is filtered, and completed by the addition of " tincture " of quinquina, concentrated essence of aniseed, and concentrated " essence of mint," all in certain proportions.

[Printed, 4*d*. No Drawings.]

A.D. 1861, August 6.—N° 1955.

DAMOISEAU, Alcidalis Auguste Romain.—" Improve- " ments in apparatus for drawing blood or other fluids from the " human or animal body." These are, " a suitably concentrated " cupping glass or glasses in combination with an air pump or " other similar apparatus, and arranged in such a manner that " an alternate lifting and depressing, or expanding and con- " tracting of the skin of that part of the body to which the said " cupping glass or glasses are applied is to take place, with the " object of preventing the choking up or obstruction of the pores, " scarifications, or other capillary openings through which the " blood or fluids to be abstracted from the body are to flow into " the said cupping glass or glasses."

[Printed, 8*d*. Drawing.]

A.D. 1861, August 9.—N° 1991.

FALGAS, Adrien Ferdinand Benjamin.—" Improvements " in the construction of trusses and bandages for hernia, and of " hypogastric girdles or belts." These are to construct them so that " the wearer may adjust the pad or cushion as he or she finds " suitable." The arrangement is named " the 'volviform' appa- " ratus," and consists of " a rod, shank, arm, or strip, having at " one end a ball or round knob, and slotted longitudinally to " receive screws whereby it is connected to the spring bandage, " or girdle, so that the latter may be lengthened or shortened " round the person, as required." " Another essential portion of " the volviform apparatus is a cup or socket, which receives the " ball. This socket is on an arm which also carries the arrange- " ments which act on or move the ball to retain the socket in the " desired position. On this arm is also a concave plate," which padded " constitutes the pad, which being thus attached to the " socket can be inclined in various directions by the wearer, and

" be thereby accommodated to such position as may best suit his " ease and comfort."

[Printed, 8*d*. Drawing.]

A.D. 1861, August 20.—N° 2065.

FITKIN, WILLIAM.—" Improvements in apparatus or instru-" ments for extracting teeth." These consist of two separate portions, " which when put to use are employed in combination; " each has a handle or end conveniently formed for holding and " using it." One of these instruments, called the fulcrum instrument, has a " rest piece intended to bear or rest against the " gum or jaw," and also has a " bridge piece or arch, which is " so shaped that when the rest piece is applied against the gum, " this bridge piece or arch passes over the tooth and affords a " fulcrum or bearing point for the second instrument or elevator " to rest and work upon at the opposite side of the gum to that " against which the rest is applied." " The second instrument (or " elevator ") is serrated or otherwise conveniently formed at " one end for acting directly upon the tooth in the operation of " extraction, and is also conveniently contrived for resting on " the bridge piece or arch," for which purpose it is preferred " to shape it with an orifice near the end, by which it is passed " over the end of the bridge."

[Printed, 8*d*. Drawing.]

A.D. 1861, August 26.—N° 2123.

NYE, GEORGE.—" Improvements in apparatus for administering " injection in a continuous stream, also applicable as an eye douche " and other purposes." These are, first, the " employment of " an india-rubber compressible vessel, fitted with air valves, in " combination with a reservoir or holder for liquid," so that " by " means of such india-rubber vessel the liquid may be discharged " in a continuous stream." A valve is at the upper part of the india-rubber compressible vessel, and a valve at the lower part. The eduction tube leads out of the reservoir.

Second, the application to eye and ear douche apparatus of a " rigid discharge pipe " to apparatus as above, so as to avoid the " necessity of holding the pipe to the part affected."

Third, " the arranging of the valve that opens and closes the " eduction way, so that it may be readily removed and replaced."

In this apparatus the fluid passes up through a hollow foot, in the upper part of which is a valve, and above it another valve; to get at these valves the foot is detached.

[Printed, 10*d*. Drawing.]

A.D. 1861, September 14.—N° 2293.

MENNONS, Marc Antoine François.—(*A communication from Salvator Vinci.*)—(*Provisional protection only.*)—"An im-"proved apparatus for conveyance of medicinal substances into "various parts of the human body." This instrument is composed of a tube or rod varying in form, material, and dimensions, according to its intended application, "and provided with spiral "grooves as" receptacles or conductors to the medicinal substances "necessary to convey into the diseased passage or cavity." Some examples are stated.

[Printed, 4*d*. No Drawings.]

A.D. 1861, September 23.—N° 2374.

IANKOWSKI, Vincent.—(*Provisional protection only.*)—"Im-"provements in carriages." These are constructed with a view to obtain a wave motion. For this purpose the supporting axle or axles are fixed to the wheels, and are formed with cranks, or eccentrics, where they support the body of the vehicle, so that as the wheels rotate, "the body will be alternately raised and "lowered." "This motion will be rendered more agreeable by "the application of springs." "These carriages, it is stated, are "adapted" particularly for the use of children or invalids.

[Printed, 4*d*. No Drawings.]

A.D. 1861, September 25.—N° 2398.

RUSSELL, Godfrey.—"Spring stretchers or bedsteads for "camp, hospital, or general use." Using "steel springs in lieu "of legs of size & form to suit the intended object. If folding "underneath, they work on a pivot fixed through an iron clip "passing over & fixed to the wood sides or otherwise, and laying "back, when in use, into a double flanged metal bed of brass or "iron, attached to the sides, in which bed it is fastened when in "use; if fixed, attached by bolts also. Cross bars of angle iron "so fitted at the ends as to drop into iron sockets attached to "the sides, and so as to take a bearing on all its parts also. The

" fold iron head piece (or pillow) fitted into or to two square " sockets in head cross bar formed by two uprights, with bars " at right angles, attached with clip or socket hinges, shouldered " to the required horizontal angle, with or without a cross bar " cranked at both ends, uniting their outer ends with a pivot " joint; over this sadler's web or canvass is tightly sown also." For fixing or lacing the canvas a number of different shaped metal eyes are used; these eyes are used for wood also, or copper rivets and nails are used. For the cover or awning, using " two " wood or iron arches, plain or folding, width of bed or stretcher, " to which it fixes by common iron sockets at the sides. The " cloth or canvass cover is attached by hooks or rope or metal " grumats, by a cord sewn into cover passing from end to end " just above the curtains (which are simply formed by a central " division either side) at head end. The foot end is similarly " attached with addition of a leather strap to tighten it. The " curtains have one fastening on either side underneath side bars, " and a hook or stud for each one inside the arches or hoops."

[Printed, 10*d*. Drawing.]

A.D. 1861, September 27.—Nº 2413.

FRANKLIN, Richard, and BACCHUS, George.—(*Provisional protection only.*)—" A reversable back-supporting nursing " belt." This consists of a belt made " of fine webbing, attached " to the back of which is a soft pad, made of any suitable materials, and having supporters of about three inches in length of " whalebone, cane, or other like substance; the band is of sufficient length, so that after passing round the waist to which it " is adjusted by means of a buckle or other suitable fastening, it " forms a handle for the nurse, the two ends being tied together " by means of ribbon ends tacked to the webbing; or they can " be attached in any other suitable manner."

[Printed, 4*d*. No Drawings.]

A.D. 1861, September 30.—Nº 2438.

REOCHE, Etienne.—(*Provisional protection only.*)—" A new " medicinal preparation applicable internally for rheumatism and " other disorders." This is as follows:—" The roots of the " pomegranate and date trees, to which may or may not be added " that of a plant, known in France as santorée," are macerated

" in brandy or other spirit alone, or it may be in brandy and wine " mixed, or in wine alone," and " allow the whole to ferment, " and then bottle off, and keep for use as required."

[Printed, 4*d*. No Drawings.]

A.D. 1861, September 30.—N° 2441.

BOBŒUF, Pierre Alexis Francisse.—"The preparation " and application of certain new hemostatic and antiseptic " agents." These new agents are " alkaline phenates and salts, " obtained by means of mineral and vegetable essential oils, " soluble in caustic potash or soda." The oils named are " coal, " peat, wood, and ligneous oils, acid oils, which, when not " actually phenic acid, are analogous or homologous (such as " creosote), and possess, like phenic acid, the same hemostatic " properties."

To prepare the phenates, add to the oil caustic soda of a certain strength; agitate the whole, and allow it to stand, when there will be found two layers, the lower of which is the phenate; this is drawn off, and if of too high a gravity, it is shaken with more oil; if not of too high a gravity, it is treated with a certain amount of water, when it will again separate into two layers, the lower of which is the phenate. This diluted for use; for fresh cuts and wounds it is used " at a strength of 5° Beaumé, for old " wounds which have ceased bleeding at 2° only." Phenates may be made by adding the alkali directly to " phenic acid, or " acid oils, previously extracted." These solutions " are applied " to stop hemorrhage," or the phenates are obtained and used in " a dry and divided state, by absorbing them into different substances," &c. When " dry they may be used as antiseptics." " To produce more energetic phenates in a dry and pulverized " state," insoluble phenates of lime and baryta are used, obtained by double decomposition.

[Printed, 4*d*. No Drawings.]

A.D. 1861, October 4.—N° 2482.

GHISLIN, Thomas Goulston.—" Improvements in the treatment or preparation of certain foreign plants or vegetable " substances, and in the application of the same to various useful " purposes, for which horn, shell, whalebone, indurated leather, " fish skin, ivory, bone, hard wood, and compounds of india-

" rubber or gutta percha have hitherto been employed." The plants used " are those known to botanists as the eiklonia, bucci- " nalis, Laminariæ buccinalis, Duvillea utillea, Sarcophycus " potatorum, and their allies." It is proposed to apply them to a vast number of purposes, among which are named " handles for " surgical instruments." Several modes of preparing the plants are described; these are, generally, by steeping in acid, alkaline, and other solutions; and one is to grind it and mix it with other substances to be moulded. It is also bleached, and also stained.

[Printed, 4*d*. No Drawings.]

A.D. 1861, October 12.—N° 2553.

FURLEY, Robert Charles.—(*Provisional protection only.*)— " An improvement in coating pills for rendering them tasteless." This " consists in covering them with albumen " white of egg is preferred, " but albumen obtained in any way may be employed in " place thereof."

[Printed, 4*d*. No Drawings.]

A.D. 1861, October 19.—N° 2613.

MARSHALL, John.—" The collection, concentration, and trans- " mission of sound, so as to facilitate the hearing thereof." This consists " of a combination of reflecting surfaces," " which are so " formed, and are adjusted in such relative positions, that the rays " of sound are received on one or more of these reflecting sur- " faces, by which they are again reflected in a parallel or nearly " parallel manner, into a conducting tube, or into several con- " ducting tubes, which conveys or convey them to the ear."

[Printed, 1*s*. 2*d*. Drawings.]

A.D. 1861, October 26.—N° 2683.

MENNONS, Marc Antoine François.—(*A communication from Léon Victor Collongues.*)—" Improved apparatus for ascer- " taining the presence and degree or cessation of vitality in the " human body, and in animals of the higher class, applicable to " the semeiosis of health, disease, and death." This is said to be effected by means of a combination " of accoustic apparatus." " Advantage was taken of the known principle in accoustics that " each note of the diapason executes a given number of vibra- " tions per second," and two steel diapasons giving different degrees of sound are formed, each composed of a fork with double branches "fitted with metallic slides," which are adjusted to the required note by means of pressure screws; in continuance from the fork is a threaded rod passing through a caoutchouc disc, and a cork conductor, and again through another caoutchouc disc, screws into either a wooden or metallic support. "The " branches of the diapasons thus arranged are graduated by any " of the known acoustic processes, to the points at which the " slides should be adjusted for the production of the different " notes of the scale." Two other diapasons, producing a series of lower tones, are mounted in preference horizontally on massive supports. "A sound conducting apparatus, termed 'a dynamo- " 'scope,' by means of which the notes emanating from the " nervous system are rendered sufficiently perceptible to the ear " to be accurately compared with those emitted by the diapasons " above described." This apparatus, the form of which may vary according to its intended application, is generally composed of a solid rod, provided at one extremity with an ear piece, and at the other with a cylinder or finger or other piece. This finger piece is placed over the cork conductor of one of the diapasons, and the latter is sounded by striking the branches, and by the ear piece the sound or note is observed and noted. The instrument is then changed from the diapason to the finger of the subject to be examined. "The ear being applied as before, the " note proceeding from the nervous vibrations is compared with " that just chimed by the diapason." There are tables formed indicating "the semeiotical value of the different notes."

[Printed, 8*d.* Drawing.]

A.D. 1861, October 29.—N° 2709.

SAVILE, William.—(*Provisional protection only.*)—"Improve- " ments in machinery or apparatus for the manufacture of elastic " surgical stockings, socks, knee caps, belts, bands, or other " articles." These consist in manufacturing these articles "on " the ribbing frame," with additional parts. These parts are " three additional sets of carriers, each secured to a carrier bar " somewhat shorter than the length of the frame," "which bar " slides on a rod or bar, and is supported at each end of the " frame; in wide frames it is also supported at the centre and at " each end of the rod or bar; but lying within the bearings are

" a number of pieces of iron of the required thickness; when " these hang down the carrier bar can be moved from end to end " of the rod or bar, but when the fabric is required to be nar- " rowed one or more of the pieces of iron are turned up at each " end." A mode is given of manufacturing these articles in hosiery frames, known as rotatory frames.

[Printed, 4*d*. No Drawings.]

A.D. 1861, November 13.—N° 2861.

BIRD, Henry.—" Improvements in the construction of bottles " and other vessels, and in stoppers for the same to indicate that " they contain poison." These are, " forming or applying to " the tops of corks or other stoppers a number of horizontal " sharp points radiating from and beyond the upper edge of the " cork or other stopper, so that the cork or stopper cannot be " casually withdrawn from the bottle or other vessel in which it " is fixed by hand, without the operator feeling one or more of " the sharp points." Bottles and other vessels for containing poison are constructed with a number of sharp angular points with the same object and with a like effect.

[Printed, 8*d*. Drawing.]

A.D. 1861, November 16.—N° 2885.

D'ESTANQUE, Eugène.—" An improved instrument for draw- " ing teeth." This instrument " requires no fulcrum within the " mouth." The tooth being seized between two bits or nippers, " slides along the lower bit by the attraction of the upper one, " which is moveable backwards, and in an upward direction. " This bit or nipper may be drawn backward in several ways, by " a rack, a rod, a spring, in fact by any means which will give it " a resisting power." " A spring gives the requisite pressure to " the upper key or nipper, and fixes it " to the tooth.

[Printed, 6*d*. Drawings.]

A.D. 1861, November 23.—N° 2946.

BROOMAN, Richard Archibald. — (*A communication from Charles Halpen.*)—(*Provisional protection only.*)—" An improved " cup or vessel for administering liquids." This vessel has a curved spout projecting from its lower part, " the outflow from " which is regulated by a stopper carried on the end of a lever,

" and kept in contact with the mouth of the spout by a spring, " and which is released to the extent required by depressing the " tail of the lever; or a stop cock is fixed in the spout; or the " spout is opened or closed by a plug fitting into or over the " passage, where it springs from the vessel, the plug being " worked by a stud outside the vessel connected to a rod, to " one end of which the plug is fixed."

[Printed, 4*d*. No Drawings.]

A.D. 1861, November 26.—N° 2976.

JOHNSON, John Henry.—(*A communication from Otto Langgaard.*)—" A new or improved apparatus for supporting the womb " in cases of prolapsus uteri." This consists of a ring connected by swivel joints to two link pieces, which are again connected by ordinary hinge joints to the outer ends of two expanding wings, which are jointed together in the centre of the apparatus, similar parallel joints or hinges being formed across the ring, for the purpose of enabling the apparatus to be closed when being placed inside the vagina. " In applying this apparatus it is introduced " with the ring first into the vagina until the wings have com- " pletely entered, whereupon it is opened or expanded by slight " lateral pressure against the sides of the wings."

[Printed, 6*d*. Drawing.]

A.D. 1861, November 29.—N° 3012.

PERRY, Robert Crawford.—" An improved infant's feeding " bottle." This consists in applying " to the ordinary feeding " bottle a novel form of valve," made of some elastic material; it " is in the form of a short tube, one end of which is attached " to the cork or stopper of the feeding bottle, the other end pro- " jecting a short distance into the bottle, and terminating in an " orifice of about the same size as the outer diameter of the " suction tube, which passes through it, a perforation in the cork " or stopper admitting air to the interior of the valve." On sucking, the air enters the perforation, and expanding the extremity of the valve enters into the interior of the vessel, but in case of the vessel overturning, " the fluid acting on the exterior " surface of the valve tends to close it more effectually."

[Printed, 6*d*. Drawing.]

A.D. 1861, December 2.—N° 3022.

WAKENELL, James.—"Improvements in the construction of "invalid bedsteads, convertable into other articles of furniture, "for the use of invalids." These are as follows :—The ordinary frame of a bedstead is to be fitted with a separate moveable bottom, running on friction rollers in a groove on the ordinary frame. This moveable frame is jointed at about one-third of its length from the head of the bedstead in such a manner that the upper or head end may be made to assume an inclined position, by means of a winch or crank handle, furnished with a pinion, working in a rack upon the under side of the moveable frame. A table with a rising desk, for the purpose of holding a book, &c., travels up a groove on each side of the fixed or under frame of the bed, and is readily fastened to the moveable frame. The whole apparatus can be made to form an easy chair and table combined.

[Printed, 10*d*. Drawing.]

A.D. 1861, December 3.—N° 3034.

NEWTON, William Edward.—(*A communication from Samuel Stockton White.*)—Improvements in artificial teeth. These are, manufacturing the teeth "with pins having heads at their outer "ends, which, when imbedded in the vulcanite, will firmly hold "therein."

[Printed, 6*d*. Drawing.]

A.D. 1861, December 7.—N° 3069.

JOLLEY, Richard.—"An improved apparatus for heating, "cooling, or drying, infusing, extracting, or absorbing vapours "or gases, for manufacturing, medical, or domestic purposes, and "for preserving liquids and solids, alimentary or otherwise." This consists of an air-tight vessel called "a safe," made upon "non-conducting principles, with valves to let air in or out." It is made "wholly or in part of pulp or fibrous substances, woven "or compressed," &c. It is made double, and the place between is stuffed with non-conducting materials, fibrous or otherwise. Gas is laid on, "to burn inside or out, with a metal covering to "prevent injury;" or, "steam, hot air, or water, lime, or any "liquid or solid, mixed or otherwise, which will produce heat," may be used. "For the purpose of cooling and extracting," placing "within this safe, about the upper part, a vessel or vessels" "of such form as will cause the adhesion of vapours during the "process of extraction, which vapours and waters are conducted "by pipes, drains, and traps, for quickly carrying off or collecting "whatever is distilled, or extracted, or required," &c.

"Carbon, charcoal, lime, salt, sulphuric acid," &c., are placed anywhere within this safe, for the purpose of preserving "all "kinds of provisions," &c.

[Printed, *4d.* No Drawings.]

A.D. 1861, December 10.—N° 3100.

AGNEW, JOHN WASHINGTON.—(*Partly a communication from Henry Palmer.*)—(*Provisional protection only.*)—"A new and im-"proved electro-voltaic pocket battery." Constructed as follows:—"A series of any number of hollow spiral tubes are formed, "composed of zinc and platanized silver ribbons or flattened "wires," are "separated from each other by crotchet cord or other "absorbent material," by regularly and methodically twisting to the right and to the left, and are only brought into contact at their extreme ends. These series of tubes are held together by a "framework. "Twenty-one or more tubes so arranged form a "wing," and two or more wings hinged together form a battery.

[Printed, *4d.* No Drawings.]

A.D. 1861, December 18.—N° 3169.

CARTWRIGHT, MATTHEW. — (*Provisional protection only.*)— "Improvements in the manufacture of beds or palates for the "reception of artificial teeth." These consist in employing "the "well known vulcanite in the form of a solution, which is painted "on to the model" in lieu of being moulded, "thereby dispensing "with the powerful pressure hitherto required." "When a "sufficient thickness of coating has been attained, the plate "is subjected to the action of heat." "If desired, suitable "strengthening or filling up pieces may be applied" at certain parts.

[Printed, *4d.* No Drawings.]

1862.

A.D. 1862, January 2.—Nº 21.

CARTWRIGHT, MATTHEW.—(*Provisional protection only.*)—" Improvements in the manufacture of models and of 'plates' " or 'pieces' for artificial teeth." These are "making models " used in preparing plates or pieces for artificial teeth of vulcanite, " ebonite, or hardened rubber, alone or combined with soft vul- " canized rubber," as follows, "take a cast or impression of the " mouth in wax, cover the surface of it with plaster of Paris, and " when dry, paint it with a mixture composed of oil and ver- " millon. The cast or impression then receives a second coat of " plaster, which, when dry, again receives a coat of oil and ver- " milion, and so on until is sufficiently thick for the purpose to " which it is to be applied. The wax is removed, and the whole " is coated with vermilion and oil as before." This model " is " inserted in the lower half of a flask containing liquid plaster, " from which when hardened this model is removed, and its " counterpart or impression is reproduced in the plaster." This " is now filled with wax, and the rest of the plaster coated with " vermilion and oil, the upper half or portion of the flask is now " placed on the lower half and filled with liquid plaster, a cover " is placed on it, and the whole allowed to harden." The flasks " are now divided, the wax in the lower flask is picked out," and the space " is filled up with the composition of india-rubber to " form vulcanite, the flasks are again put together, heated, and " subjected to pressure in the ordinary manner, and the rubber is " finally vulcanized." "The flasks are opened, and the model " removed." To produce a counter model in vulcanite, "coat " the vulcanite model with black lead, lamp black, bronze, gold- " beater's skin, or other suitable material, and place it in the " lower half of the flask (that part representing the mouth being " uppermost) which contains soft plaster, where it is allowed to " harden. The whole, or as much of the model as necessary, is " now covered with wax, and the lower half painted in the ordi- " nary manner; the upper half of the flask, which is filled with " plaster, is now put on, the lid is also placed on, and the whole

" allowed to harden," the " flasks are separated, the wax removed, " and india-rubber composition inserted in the cavity it occupied," the flasks are put together, and " the india-rubber vulcanized in " the ordinary manner." Sometimes the models and their counterparts are formed by painting the liquid india-rubber " on the " model, each coat being dry before the next is applied. When " an elastic model is required soft and hard rubber are used " alternately, or hard rubber in combination with cotton or any " other material capable of rendering it elastic." Plates or pieces made as above " may be coated with crystal or plastic gold, gold " leaf, platina leaf, tin foil, gold shell, silica, filings or gold or " other metal."

[Printed, 4*d*. No Drawings.]

A.D. 1862, January 15.—N° 114.

TIMMINS, THOMAS, and SIMMONS, THOMAS.—" An im- " proved bath combining in itself the advantages of the hot air " or turkish bath, with the vapour, slipper, hot and cold water " shower bath." The body of the bath is of sufficient size and capacity for general use with a projection at the head for a pillow; a little way from the bottom placing a strong frame stretched with cane, wire, &c., for the patient to recline on, and frames at the sides to protect the user from contact with the hot metal sides. At the foot an air way is made with a lamp, &c., for heating air, which is sent into the interior of the bath. The body of the bath is partially covered over from the bottom upwards, and to this a counterpoise cover is attached with a close hinge, &c., so as to cover the bath except at the top end where an opening is for the neck of the occupant. By removing the frames before mentioned and securing the air-way with a suitable plug the bath is in every way suitable for the use of hot or cold water as ordinarily employed. Tubular uprights are fixed at the head and the bottom of this bath to support rods for curtains around it. The tubular uprights at the head of the bath are connected with reservoirs of hot and cold water and these are opened by valves, so that the occupant pulling either wire open may have a shower of hot or cold water. " Baths thus constructed may be " used in extreme cases as a bed, which may be very desirable in " administering to an invalid a hot air or vapour bath, such hot

" air being discontinued at pleasure by removing the means by " which the hot air or vapour is generated."

[Printed, 1*s*. Drawing.]

A.D. 1862, January 30.—N° 245.

GONTARD, Theophilus.—" Improved truss plates producing " an upward pressure." This consists " in the mode of fitting " the metallic plate, on which is fixed the cushion " so as " to " exert a gradual upward pressure on the hernias." In preference " making the said plate of steel rather than of any other metal; it is composed of two parts which are jointed together as a hinge. The flattened end of the hinge peg is fastened to the usual curled spring girdling the body; both parts of the plate have corresponding notches cut in the hinge part and a small fluted cylinder fixed by a pin on the hinge peg is lodged in the said notches. On one of the two parts of the metallic plate a small tempered steel blade is fastened either by a screw or rivet; " the end of the said blade enters the fluting of the small cylinder " which is in the same line. If now the portion of the plate " carrying the steel blade acting as a spring is moved around the " hinge peg, the blade of the flexible steel yielding, its end gets " out of the fluting where it was engaged to fall back in the next " one, and to maintain the said plate either in the plain or angular " position, as the case requires."

[Printed, 8*d*. Drawing.]

A.D. 1862, February 1.—N° 273.

HILL, John.—" Improvements in the construction of portable " chairs, and other articles for sitting or reclining on, road, " childrens' and invalid carriages, ambulances or vehicles for " carrying sick or wounded persons." These are, constructing the above articles " of a framework connected together by means " of bolts or joints, such framework when extended being held in " one given position by means of knuckle joints, and by means " of the rods or pistons acting as a lever upon and regulating the " opening and shutting of the same, and by means of the " pressing down the lifting seat upon the spring catch or other " similar contrivance, rendering the joints or other parts rigid " when in use." As an example in a perambulator, the bottom part of the back " is hinged to the framework of the seat. The

" propellers or handles are also hinged to the top of the back, so " that when not in use they hang at the back of the perambulator, " and attached to such propellers or handles just above such " joints are hinged or jointed two rods or pistons by means of " bolts, one to each propeller or handle. The other end of such " rods or pistons is hinged or jointed to the end of the side pieces " or elbow rests which project a little beyond the back of the " perambulator, such rests being also hinged to the side pieces " of the back by bolts on which they turn. The front pieces " which support the foot rest and front wheel are hinged to the " front end of the two side pieces or elbow rests and also to the " framework under the seat by nuckle joints, and when open for " use being held in position by means of the knuckle joints. " Also a lifting seat, which, when shut down on a spring catch or " other similar contrivance renders the knuckle joints and other " parts rigid, (or a jointed stay may be used for the same purpose " fixed on one or both sides)."

[Printed, 8*d*. Drawing.]

A.D. 1862, February 10.—N° 339.

MENNONS, MARC ANTOINE FRANÇOIS.— (*A communication from Eliacin Edouard Pomier.*)—" Improved apparatus for the " administration of vapour baths." This consists of the combination of apparatus for the above purposes arranged as follows :—A " vaulting constructed of iron or other suitable material " over which is stretched, when in use, a cover or curtain of im- " permeable tissue." The patient is placed on a mattress under this cover, and below him is placed what is termed the generating apparatus, which consists of a boiler charged with water or medicated solutions underneath which is a spirit lamp, and over which is a perforated tray."

" For aromatic plants, and such other products as should not " be infused in the water ;" over this generating apparatus is a pierced cover, through which pass the vapours disengaged from the " boiler. When dry vapour is prescribed the upper section of the " generating apparatus is removed, the spirit lamp and support " being alone retained. In the generality of cases the head of the " patient may be covered in by the curtain."

[Printed, 10*d*. Drawings.]

A.D. 1862, February 11.—N° 356.

WOOD, William.—"Improvements in the process of manu-"facturing pomfret or liquorice cakes." These are, the dough or paste (omitting the liquorice) is made and transferred to a metal or other suitable table or tables having rims and having "rotating, crushing, or spreading rollers and scrapers for replacing "and mixing the materials thereon. I then mix these with the "extract of liquorice and other materials." In some cases "the "extract of liquorice, sugar, or gum arabic, or whatever materials "may be used." When the materials are blended and dried they are formed into slabs or sheets by passing through a succession of flanged rolls between which are stamps which cut out the cakes.

[Printed, 2*s*. Drawings.]

A.D. 1862, February 15.—N° 402.

COLWELL, Henry.—(*Provisional protection not allowed.*)—"An "improved truss for hernia, prolapsus uteri, and prolapsus ani." This is to be made "without the use of steel or other metallic "spring, waterproof in all its parts, and capable of continuous "wear without removal in bed or the bath. With inflated pa "and internal cone for the purpose of effecting a permanent cure "upon known scientific principles."

[Printed, 4*d*. No Drawings.]

A.D. 1862, February 20.—N° 449.

LEE, George Frederick. — (*A communication from Thomas Scott Lambert.*)—"An improvement in tourniquets." This is said to be "the construction of a simple, cheap, and efficacious "field or army tourniquet by the combination of elastic and "non-elastic bands with a compression and counteracting pad," in "such manner that, the flow of blood in any particular artery "may be stopped without interrupting the flow of blood in the "veins. "The arterial or compression pad made of metal is "slightly concave on its lower surface, and correspondingly "convex above." It has wings hinged to its upper surface and arranged "so as to throw up their outer ends about an inch "above the level of the lower surface." There is a counteracting pad like the compression one, only larger, and furnished with two loops. There is a non-elastic band webbing, and attached to it is an elastic band. The ordinary mode of using this tourniquet is to place the arterial or compression pad " over the main artery " of the limb to be operated upon," bringing the concave surface of the counteracting pad against the opposite side of the limb, then pass the bands through the outer wing of the compression pad, and draw it tightly to hold the pad in place, then turn the band directly back, so as to carry it over itself and the wings of both pads, the elastic part being stretched, so that each turn around the wings will increase the pressure until the flow of blood in the artery is stopped, when the free end of the band should be passed under a tense turn of it, and thus held securely. When this tourniquet is used in case of amputation of a limb, the band is not to be carried over the wings but through them, and in the treatment of aneurism by compression the same plan may be adopted if thought preferable."

[Printed, 6*d*. Drawing.]

A.D. 1862, March 1.—N° 560.

GABRIEL, MAURICE, and GABRIEL, ARNOLD.—(*Provisional protection only.*) — " Improvements in the bases of artificial " teeth." These are said to be " the production of an un- " alterable and non-irritant substance, imitating, as near as " possible, the natural bone and gum, dispensing in the manu- " facture thereof with any injurious substance or color or " preparation of arsenic and mercury, the said composition to " be hereafter known as osteo-eidon or artificial bone." This is composed of india-rubber 7 parts, sulphur 2 parts, phosphate of lime 2¼ parts, phosphate of soda 2 parts, but these proportions " can be varied as circumstances may require." " The said com- " pound is then moulded and hardened by well-known processes," adapted, polished, and the entire piece submitted to the action of a powerful electro-galvanic battery for the purpose of depositing a thick coating or envelope of pure gold over the entire base, or in such parts only as may be required by the peculiarities of the case."

[Printed, 4*d*. No Drawings.]

A.D. 1862, March 6.—N° 605.

LAWRENCE, George.—(*Provisional protection only.*)—"Improvements in the manufacture of flesh gloves and flesh straps." These are "manufacturing flesh gloves and flesh straps that the "same instruments may be used at different times either as flesh "gloves or as flesh straps." For these purposes flesh gloves are made "with a strap at one end of each glove," and they are joined together "by means of buttons or other fastenings." Thus "the two flesh gloves of which a flesh strap is composed, when "detached or separated the one from the other, are capable of "being used on the hands in the ordinary manner in which flesh "gloves have been used."

[Printed, 4*d*. No Drawings.]

A.D. 1862, March 11.—N° 662.

DAVIES, George.—(*A communication from Abraham Merritt Asay and Jacob Lambert Asay.*)—"Improvements in attaching "artificial teeth to plates and to each other, and in moulds for "forming artificial teeth." These are, first, "fastening artificial "teeth to metallic plates by interposing between the said teeth "and plate a strip of vulcanizable gum, and vulcanizing or "hardening the same after the teeth have been adjusted to the "plate."

Second, "packing with vulcanizable gum the interstices between "the teeth and plate, or between the teeth themselves, where the "latter are secured to the plate by rivetting or any other of the "usual modes, and vulcanizing or hardening the packing after it "has been adjusted as specified."

Third, "dovetailed recesses formed in artificial or blocks of "artificial teeth in combination with perforated, serrated, or "notched ribs or projections on the plate, so that the teeth may "be firmly secured to the plate through the intervention of "vulcanizable gum or any silicious or other suitable cement."

Fourth, "forming in artificial teeth or blocks of teeth, at the "point where they meet each other, dovetailed recesses of such a "form that vulcanizable gum or other cement introduced into "the said recesses will prevent the separation of said teeth or "said blocks from each other."

Fifth, "the use of staples imbedded in artificial teeth as a "means of securing the same to vulcanized gum plates or to "masses of vulcanizable gum attached to metal plates."

Sixth, "so constructing moulds for artificial teeth," that by means of two adjustable pieces "blocks of teeth of any required "depth of gum may be formed in the same mould."

Seventh, the use of these moveable pieces with rounded projections for the purpose of forming depressions of any required form in the bases of blocks of teeth. By sliding back these moveable pieces and introducing supplementary pieces, "blocks of teeth of any required size may be cast from one "mould, so far as the length of the gum is concerned, while "the recess for fitting over the alveolar process on the plate may "be made of any required shape" by making the projecting portion of the moveable pieces of the desired form.

Eighth, the combination of the base and cap of the mould with the moveable pieces, guide rods, and pins which form the holes in the material in its plastic state for the purpose of securing the teeth by rivets to the plate.

Ninth. A modification of the above, in which the supplementary pieces named under the seventh head are dispensed with, "or any "other mere modification thereof, constructed and operating in "substantially the same manner."

[Printed, 10*d*. Drawing.]

A.D. 1862, March 14.—N° 703.

BIRKBECK, GEORGE HENRY.—(*A communication from Louis Polydore Grandcollot.*)—"Improvements in trusses or bandages, "and in pessaries to be used therewith when required." These relate to "the arrangement and combination of a jointed and "moveable pessary, a replacing and graduated relieving apparatus or instrument for keeping the uterus in its place, and "intended for the cure of prolapsus uteri, and to remedy the "displacement of that organ." "This instrument is connected "to or combined with a double-jointed hypogastric bandage with "posterior pad or cushion by a curved supporting arm of swan-neck form, which fits the convexity of the pubis, and which "can be moved as required to the right or left, in order to adapt "itself in the most convenient manner possible to the intravaginal "rod which carries the bowl or hollow elastic instrument for

" supporting the deranged organ. The mode of jointing the
" intravaginal rod with the curved arm or swan-neck connection
" allows the rod to move freely round its vertical axis, so as to
" perform the lateral, anterior, posterior, and all the motions
" intermediate to them, and, lastly, to describe a circuitous
" movement. Two pads or cushions are jointed to the hypogastric truss, which are capable of being readily fixed and
" adjusted in any desired position; these pads or cushions are
" intended to sustain the weight of the abdomen, or to exercise
" a pressure on the region of the anus, or upon any one or more
" of such points." "The truss or bandage is composed of a
" cushion which takes its point of support on the lumbar region,
" at which point two springs are attached, the anterior extremity
" of which is furnished with two pads or cushions capable of
" yielding and being placed in inclined or other suitable positions.
" The inclination of these pads or cushions is first adjusted and
" then fixed in the required position by a screw, which produces
" the pressure on a ball and socket joint at the back of each
" pad or cushion on which they are capable of rotation. The
" distance or position of the pads or cushions from each other
" can also be varied. The parts are connected together by a
" double-hinged joint, and fastened by a spring, bolt, or by other
" convenient means. To the central part of this jointed piece a
" vertical plate is fixed by a screw, so as to be capable of adjustment to vary the position of the parts connected thereto. To
" the lower ends of this vertical plate the curved arm which
" supports the pessary is attached by suitable joints, so that the
" height and inclination of the pessary can be arranged and
" controlled as required. The lower end of the curved arm is
" formed with a spherical joint, which supports the intravaginal
" rod consisting of a tube marked with divisions, which indicate
" the respective heights to which the hollow bowl or pessary can
" be raised. Around this there is another tube formed into a
" fork at the upper end, to which the hollow bowl or pessary is
" jointed. In the interior of the tube there is a screw rod, which
" screws into a socket, the upper part of which is forked, and is
" also jointed to the hollow bowl or pessary, and by giving
" motion to this screw by means of a screw nut at the lower end,
" the inclined position of the hollow bowl or pessary may be
" varied. An internal helical spring is inserted in the tube to

" impart the vertical elasticity necessary to the intravaginal rod " to accommodate itself to any movement or change of position " of the parts." To the back of the hollow bowl or pessary a kind of prolongation may be applied in the form of the back of an arm chair, "which serves, in cases of weakness, to raise up " and correct the position of the body of the uterus." The hollow bowl or pessary may be made of elastic or suitable material, the lower part hard to be attached to the mechanism, the upper surface, coming in contact with the organs, is soft and flexible.

[Printed, 10*d.* Drawing.]

A.D 1862, March 15.—N° 711.

COLES, Alfred, and COLES, William. — "Improvements " in the construction of trusses for cases of hernia." These improvements, it is said, are applicable to that kind of truss described in No. 4567, Old Law, and consist as follows :—" A " piece of metal, constructed with a longitudinal slot therein, is " connected with the body spring of the truss by means of a " set screw, which acts as a pivot and works in a smaller slot " at one end of the said piece of metal. The front pad is " connected by its back with the slotted piece of metal by set " screws passing through the longitudinal slot, thus enabling " the pad to be shifted and fixed by means of the set screws, the " result being that the truss can be lengthened or shortened as " may be desired, while by reason of the said slotted piece of " metal being pivoted to the body spring as before mentioned, " it can be placed and fixed at any required angle thereto." " By these arrangements the same truss can be rendered applicable to cases of inguinal, femoral, scrotal, or crural hernia by " simply adjusting in manner before mentioned the position of " the pad and the angle thereof with reference to the body spring. " The posterior end of the body spring is also furnished with " a longitudinal slot, whereby the position of the back pad can " be altered and adjusted, set screws being employed for fixing " the same." These "improvements are equally applicable to " double trusses."

[Printed, 10*d.* Drawings.]

A.D. 1862, March 20.—N° 780. (* *)

CLARK, William.—(*A communication from Antoine Auguste Mollard.*)—(*Provisional protection only.*)—"Improvements in the "manufacture of soap." These are manufacturing soap "with "a sulphurous base." The sulphurous matters employed are especially those of organic origin, and are "glairine and barégine, "deposited by certain natural waters," or are analogous substances. The sulphurous matters are increased "when the soap "is to be used for medicinal purposes." Other matters deposited by natural or mineral waters, such as salts of iron or "magnesia, arsenious and other acids, whether mucilaginous "or not, and whether of a sulphurous or other nature," are mixed with soaps. In certain cases neutralizing "by any known "means the excess of alkaline base which might result from the "introduction of the alkaline, natural, or other sulphurets in "the soap paste." Sulphur itself in some shape may be added, also sulphites, hyposulphites, &c. The soap may be used "as a "medicament for diseases of the skin."

[Printed, 4*d*. No Drawings.]

A.D. 1862, March 29.—N° 885.

NEWTON, William Edward.—(*A communication from David Dunham Stelle and Abram Van Arsdale.*)—(*Provisional protection only.*)—"An improved mode of applying acoustic apparatus in "churches and other buildings and apartments." This consists of an elliptical funnel, circular, square, or other formed shaped receiver, gradually assuming a circular form towards the bottom where it terminates in a circular throat from which a pipe runs under or above the floor to any point where it is led, and connected with "a suitable ear piece to be placed in the ear of the "person requiring to conduct the sound thereto." "The conducting pipe may have as many branches as may be desired, "and each branch may have as many branches as may be necessary, with flexible connections to carry the sound to as many "persons as may require them."

[Printed, 4*d*. No Drawings.]

A.D. 1862, April 3.—N° 950. (* *)

HASSALL, Henry Thomas, and BURKE, Michael.—"Improvements in reclining or invalids' chairs, and in swinging or

" ships' chairs." In the former the back and seat are jointed together, the horizontal part of the arms to the back, and the front uprights to the horizontal parts and to the front of the seat; the uprights are continued downwards and the foot rest is jointed to them. A fixed frame, strengthened at front and back by stays, supports the above, being jointed to the back and upright about midway between the arms and seat. In swinging or ships' chair the connection of the moving parts to the fixed frame is effected at two points, one at the back of the seat the other at the front. The back part is suspended by an arm turning upon a pin near the top of an upright; in front the seat has fixed to it a " nearly " semicircular plate." As the chair swings, the plate travels on rollers " situated in a plate," secured to the fixed frame and " having nearly the same curvature " as the upper one; it is guided in its motion by ears " on either side " of the lower plate. " A small bolt on the top of the side of the frame " enables the chair to be fixed in any position. The chair may be arranged, if required, to take " the backward and forward positions " of the reclining chair. In rocking chairs the seat is supported at each side by a rod which is jointed to the fixed frame near the bottom; it rests at front and back on bent springs fastened at one end to its under side and at the other to pins on the frame.

[Printed, 8*d*. Drawing.]

A.D. 1862, April 8.—Nº 997. (* *)

BREAREY, Frederick William.—" Improvements in medi- " cated cups or vessels for drinking purposes."

1st. " The improved medicated steel bitter cup."

2nd. " The improved medicated mineral cup."

3rd. " The improved medicated galvanic cup."

A glass cup has three " water-tight cells or compartments " therein separated one from the other." " The internal surfaces " of the central compartment I line with metal or mineral on one " part and with wood or vegetable." " Extending across this " compartment, and forming a metallic connection between the " two side cells, I fix a bar or perforated plate of metal. When " using this galvanic cup, the water or other liquid is first placed " in the centre compartment, where it is medicated; then by " filling the side compartments, one with granulated copper and

" fine sand and the other with granulated zinc and fine sand, and " adding to each a little acidulated liquid, the galvanic essence " will pass or flow along and over the metal bar or perforated " conductor through the medicated water or liquid, and will " impart its medicinal virtues to the same, and thus a combined " medicated and galvanized action will be obtained."

According to another method the inventor makes the cup in two or more parts, and fixes therein a voltaic pile, and galvanizes and medicates "the water or other liquid placed therein by " slightly acidulating the same."

The Provisional Specification states that the "galvanic cup" consists of a cup or vessel made of alternate rings of zinc and copper, "so that upon placing in the vessel slightly acidulated " water" "a galvanic action is produced," and the water "in the " vessel becomes chemically affected in a corresponding degree."

[Printed, 4*d*. No Drawings.]

A.D. 1862, April 16.—Nº 1105.

CARTWRIGHT, MATTHEW.—(*Provisional protection only.*)— " Improvements in the manufacture of models and of plates or " pieces for artificial teeth, and in combining or amalgamating " india-rubber and gutta percha with metals for the manufacture " of artificial plates or pieces and for other purposes." These are, first, "making models used in preparing plates or pieces for " artificial teeth of vulcanite, ebonite, or hardened rubber, alone " or combined with soft vulcanized rubber," as follows:—Take a cast or impression of the mouth in wax, coat the surface of it with plaster of Paris, and when dry paint it with a mixture composed of oil and vermilion. The cast or impression then receives a second coat of plaster, which when dry again receives a coat of oil and vermilion, and so on, until it is sufficiently thick for the purpose to which it is to be applied. The wax is removed and the whole is coated with vermilion and oil as before." This model "is inserted in the lower half of a flask containing liquid " plaster, from which when hardened this model is removed and " its counterpart or impression is reproduced in the plaster." This is now filled with wax, and the rest of the plaster coated with vermilion and oil, the upper half or portion of the flask is now placed on the lower half and filled with liquid plaster, a cover is placed on it, and the whole allowed to harden." The flasks "are now divided, the wax in the lower flask is picked out," and the space "is filled up with the composition of india-rubber " to form vulcanite, the flasks are again put together, heated, " and subjected to pressure in the ordinary manner, and the " rubber is finally vulcanized." "The flasks are opened, and " the model removed." To produce a counter model in vulcanite " coat the vulcanite model with black lead, lamp black, bronze, " goldbeaters' skin, or other suitable material, and place it in the " lower half of the flask (that part representing the mouth being " uppermost), which contains soft plaster, when it is allowed to " harden. The whole or as much of the model as necessary is " now covered with wax, and the lower half painted in the " ordinary manner; the upper half of the flask which is filled " with plaster is now put on, the lid is also placed on, and the " whole allowed to harden;" the "flasks are separated, the wax " removed, and india-rubber composition inserted in the cavity " it occupied," the flasks are put together, and "the india-" rubber vulcanized in the ordinary manner." Sometimes the models and their counterparts are formed by painting the liquid india-rubber "on the model, each coat being dry before the next " is applied. When an elastic model is required, soft and hard " rubber are used alternately, or hard rubber in combination " with cotton or any other material capable of rendering it " elastic." Plates or pieces made as above "may be coated with " crystal or plastic gold, gold leaf, platina leaf, tin foil, gold " shell, silica, filings of gold, or other metal."

Second, combining "india-rubber and gutta percha with metals " for the manufacture of artificial plates or pieces, and for other " purposes," by "reducing the rubber or gutta percha to a " liquid state and mixing (say) gold therewith. The rubber or " gutta percha thus treated is thereby colored, and to all appear-" ance resembles a piece of pure gold."

[Printed, 4*d*. No Drawings.]

A.D. 1862, April 16.—N° 1106. (* *)

MARSDEN, William John.—(*Provisional protection only.*)— " Improvements in eye shades."

This invention consists in novel arrangements in the construction of shades for protecting the eyes from the effects of sunlight or artificial light whereby they can be more readily adjusted by the wearer, being easily closed or extended and capable of being folded flat and rendered conveniently portable. The shade is formed of silk, cotton, alpaca, gossamer, muslins linen, or other light material, sewn or fastened to a wire framework, consisting of two or three or more curvilinear wires, the smallest of which adjusts itself to the forehead and the others projecting so as to form a protecting shade set at the desired angle to the rays of light. The extremities of these curvilinear wires are jointed by vertical hinges to the ear pieces, which are similar to those of spectacles by the intervention of short pieces of metal jointed at their opposite ends by a horizontal hinge to the spring wires which pass over the ears. The vertical hinges allow the ear pieces to be folded over the front and upper part of the shade and the horizontal hinges allow of the lateral adjustment of the spring wires. The curvilinear wires of the frame of the shade are easily adjusted so as to cause the shade to project horizontally or to descend and form a peak as may be desired. The frame and other parts may be made of gold, silver, steel, whalebone, cane, ivory, or bone. The shade may be composed of hair, bristles, or other materials before mentioned.

[Printed, 4*d*. No Drawings.]

A.D. 1862, April 16.—N° 1107.

NEWTON, WILLIAM EDWARD.—(*A communication from David Steinberg.*)—"An improvement in setting artificial teeth." This consists in "combining the teeth with the gold or other metal "plate by means of india-rubber or other gum capable of vulcanization," and applying three bars so as to form a frame attached to this plate which insures additional strength to the plate and the adherence of the gum thereto. "The plate in which the teeth "are to be mounted is made in the usual manner but of very thin "metal, and its edges are turned over so as to make it hold the "india-rubber which is of a red color, the articulation is taken "in the usual way, and the teeth arranged upon the plate, the "teeth being formed with pins on hooks to hold the india-rubber. "Wax is then applied to the teeth and plate where the india-"rubber is, of the required thickness desired for the rubber. An

" impression in plaster of the back or uncovered surface of the " plate is then taken in one of the vulcanizing blocks, and when " the plaster is set the surface of the portion remaining around " the outside of the plate is to be oiled and also the wax, and the " other flask is put on the top of it and filled with plaster. " Having now obtained a perfect mould of the teeth, wax, and " plate, the flasks are to be separated and the teeth not having " been oiled are left sticking in the plaster in the upper flask " when the flasks are separated." All the wax is then removed from the plate, and rubber prepared for vulcanization is substituted for it, and the plate placed back in the first flask, the two flasks are firmly pressed together, and placed in the vulcanizing oven, and after vulcanization the flasks are removed from the oven and separated, the teeth easily leave the plaster and "are firmly and " permanently united to the plate by means of india-rubber."

[Printed, 6*d.* Drawing.]

A.D. 1862, April 19.—N° 1140.

MASTERS, Moses.—(*Provisional protection only.*)—" Improve-" ments in artificial legs." These consist as follows, " an improved " hinge or joint for artificial legs " is " made of metal or other " suitable material, and instead of being solid as at present, it has " a hole or perforation in the centre or at the part corresponding " with the condyle or bone at the inside of the knee. Each joint is " made of large diameter for the purpose of obtaining strength " and steadiness, and the two shoulders and internal part of the " joint are kept together by turning or hammering over the ends " of a short tube into counter sinks formed at the edges of the " holes in the shoulders." This " hinge or joint is applied to the " knee and ankle of artificial legs, or to the knee or ankle " separately, and by its use great durability and lightness are " obtained."

[Printed, 4*d.* No Drawings.]

A.D. 1862, April 23.—N° 1182.

ROBERTSON, Alexander, and **BARTER**, Richard.—" Im-" provements in apparatus for distributing and projecting fluids " either for surgical, sanatory, or domestic purposes." These consist in the general construction and arrangement of apparatus for the above purpose, and an air-tight strong vessel is employed with two or more stop-cocks, one of which is removable for enabling the vessel to be supplied with the liquid to be distributed. To these cocks are attached tubes which pass inside nearly to the bottom, and these stop-cocks are so made as to enable a rose, jet, or other form of distributing nozzle to be attached thereto. "When the vessel is supplied with the fluid by "the stop-cock, an air pump is attached to it which would force "the fluid out of the rose or jet or both." When the vessel is fully charged with air "the cock to which the air pump is attached "is shut, and the air pump removed.

[Printed, 6*d*. Drawing.]

A.D. 1862, May 2.—N° 1297.

EVANS, Ormrod Coffeen.—(*Provisional protection only.*)—"An abdominal truss, intended for the more perfect support and "cure of hernia." The truss is made "with six instead of one "or two pads as in most instruments of this class. Two hernial, "two iliac, and two lumbar." The hernial pads are conical, and "when applied to a case of single rupture, though the truss is "always made double, need not of necessity partake of the same "form on both sides," they are connected one with the other by what is here termed a pubic bar of steel or iron extending from one to the other, made in two separate pieces, and united by a set screw in a manner so as to form a slide joint, and this bar is attached at each end to its respective pad by a ball and socket, or any other device, so as to obtain a universal movement of the pad. A short hoop spring is made to extend from each hernial pad to a corresponding iliac pad, which presses upon the posterior surface of the ilium or hip. These springs are attached each to its respective hernial pad by means of a short arm, which is firmly affixed to the spring, and has at the extreme end a ball or collar, so that by inserting this arm underneath a plate on the top of the pad which has in it a slit or opening to correspond with either a ball or collar, it is not only held in position, but the pad is thereby permitted to adjust itself easily to the plane of the hernial ring. At the iliac pads, and to the end of each spring is attached a strap for the purpose of fastening the truss around the body. These straps each pass through the loops of a lumber pad, "so that

" when the truss is adjusted to the body the pads may be adjusted also, as best suits the wearer, either nearer to or further " removed from the spine."

[Printed, 6*d*. Drawing.]

A.D. 1862, May 9.—N° 1388. (* *)

McILROY, THOMAS.—(*Provisional protection only.*)—" An improved invalid bedstead." The frame is hinged " at about one-third of the length from the head." A shaft turned by a handle and carrying two cog wheels, " runs across the bedstead." Two segments, one on each side of the lifting part of the frame, work in the cog wheels; there is a ratchet wheel on the shaft and a pawl on the bed rail. A pulley is mounted in a bearing on the top part of the bedstead and another on the lifting part; a cord fastened thereto enables the invalid to raise this part to any desired height.

[Printed, 4*d*. No Drawings.]

A.D. 1862, May 13.—N° 1438.

WORMULL, ARTHUR.—" Improvements in trepanning instruments." These are, " arranging the cutting tools of trepanning " instruments in such a manner that motion may be communicated to them by means of a toothed gearing, instead of effecting this object by the wrist of the operator as heretofore." In carrying out this, " the rotary cutting tool (of which there may " be various sizes adapted to one instrument) is adapted to the " lower end of a tubular shaft, which carries at its upper end a " toothed wheel, which is driven by a pinion on a spindle mounted " in bearings in the stationary part of the instrument. This " spindle projects from the inside through the hollow case of the " instrument, and is provided with a winch handle or a universal " joint and handle, whereby it may be turned by means of the " right hand of the operator, while the left hand of the operator " is employed to hold down the instrument by pressing on a " knob at the top. A central spindle or pivot provided with a " sharp point round which the cutting tool rotates, passes down " the centre of the instrument. This central spindle is adjustable " in the line of its axis by means of a rack and pinion inside, the " latter of which is actuated by means of a thumb nut or milled " head outside." " Other mechanical arrangements, equivalent

" to those above described, may be employed to effect the required " motions," but the above are preferred " as being the most " convenient."

[Printed, 8*d*. Drawing.]

A.D. 1862, May 22.—Nº 1541. (* *)

PERRY, JAMES HILLERT.—" An improved method of curing " diseases of the human body by magnetism."

The apparatus (called " the magnetic equilibrist ") consists of a couch, easy chair, or other suitable frame fitted with a " magnetic " cap," arm rests " fitted with one or two galvanic batteries," magnetic belt, and " seat " and " foot " galvanic batteries.

In the " magnetic cap," permanent horseshoe magnets are arranged with keepers joining the neighbouring poles, so as to produce a metallic continuity in the series of magnets that are intended to be active.

The hand batteries are semi-cylindrical, and they are furnished with a metal heater.

The permanent horseshoe magnets in " the magnetic belt " are arranged in a similar manner to those in " the magnetic cap."

The batteries for the feet and seat are square, they are furnished with heaters.

" By means of the magnetic vestments and galvanic batteries a " permanent though insensible magnetic current is established " throughout the body from the head to the feet, without having " recourse to any additional conductor than the polarized magnets, " the galvanic batteries, and the vital principle of animal life. " Small batteries to be used without heat are also placed in the " soles of the shoes or boots."

[Printed, 8*d*. Drawing.]

A.D. 1862, June 3.—Nº 1674.

WESTON, STRINGER.—" Improvements in trusses." These are the combined arrangement of a disc or plate and wires or rods as follows : " the pad is mounted on and carried by a metal disc or " plate, which has two studs or projections thereon, which enters " through holes in the back of the pad. On either side of these " studs or projections is a half-elliptical spring, which is fixed to " the disc or plate, so that the ends of the springs rest against " and press the pad outwards, yet allow of its moving on the pro-

" jections or studs in any direction. On the disc or plate is
" attached one end of a bent wire or rod, by means of a pin joint,
" so that it is capable of movement. This bent wire or rod ascends
" up nearly to the hip. At the other end of this wire or
" rod there is a hook or other means of attaching it to a strap,
" which passes over the hip and behind the back of the person
" who is wearing the truss. The other end of this strap is then
" passed over the other hip, and is attached to the end of another
" wire or rod, which is by its other end fixed to the disc or plate.
" and ascends some distance from the disc up towards the hip last
" mentioned. One end of a second strap is attached to the end
" of another wire or rod, which is also attached to the disc or
" plate, and descends some distance below it. This strap passes
" between the legs of the person wearing the truss and then
" ascends up behind the person in an inclined direction, and is
" made fast to the other strap near where it passes over the hip
" last mentioned."

[Printed, 6*d*. Drawing.]

A.D. 1862, June 12.—N° 1748.

TOLHAUSEN, FREDERICK.—(*A communication from Claude Andrè Jozansi.*)—" A new or improved surgical injecting apparatus." The medicated solution is forced into the diseased organ by means of a suction apparatus consisting of a pipe with two bull valves, opening both in the direction of the mouth-piece or jet of the apparatus. Between these valves is a large flexible ball, say of india-rubber, so arranged that by alternate compression of the same the medicated solution is pumped into the diseased parts from a basin placed underneath. When used as a syringe the mouth or jet-piece need not differ from those now in use, but when used for injections into the vagina and uterus the mouthpiece is made " like an hyperboloidal shape, the base of the
" hyperboloid being elliptical in horizontal section and concave in
" the vertical section," so as to fit tight the parts and " ensure
" the vacuum necessary for working of the apparatus above mentioned.
" The hyperbolodial mouth-piece is made hollow, and
" provided with holes at the summit, so that the spent liquid may
" be let out whenever required by means of a pipe and cock fitted
" on the base part of the mouth-piece, without interfering with
" the liquid entering." " Any suitable 'canules' may be adapted

" to the mouth-piece for lengthening it out or suiting it to the " size or shape of the organ."

[Printed, 8*d.* Drawing.]

A.D. 1862, June 12.—Nº 1754.

JACKSON, Michael.—" An improved shield for the gums, to " protect them from injury when cleaning the teeth." This consists " of a thin metallic plate which is made to fit over the gums " close up to the necks of the teeth, leaving the whole of the " enamelled surface of the teeth exposed. A separate plate is " fitted to the upper and lower jaws, and these plates are secured " temporarily in their place when in use by means of spring " attachments, or by strings, or other convenient means which " will allow the mouth to be opened." " Copper and its alloys " would be inapplicable " for this purpose, " as it would leave " an unpleasant taste in the mouth, but other metals or alloys " which are sufficiently ductile, and do not possess the inconvenience above mentioned, may be employed if desired."

[Printed, 6*d.* Drawing.]

A.D. 1862, June 14.—Nº 1771.

MIQUEL, Jean Felix.—(*Provisional protection only.*)—" An " improved pessary." This is composed of caoutchouc or other elastic substance. It is oblong and varies in length from two to five inches, it is larger in the middle than at its extremities, which are cut straight, their edges and all the edges of the pessary being rounded, the thickness also varies between about half an inch and one inch. The centre of the pessary is pierced with an elliptic hole varying in diameter according to the state of the parts which it is to lift and fix, and each extremity is furnished with a handle of strong silken thread, the length of which will vary from seven to eight inches. This retentive apparatus is introduced by one of its extremities into the vagina, towards one of the sides, and the other is pushed against the opposite, so that it rests in front of the ischium.

[Printed, 4*d.* No Drawings.]

A.D. 1862, June 16.—Nº 1777.

COURTILLIER, Charles Edme. — (*Provisional protection only.*)— " Improved inhaling and saturating apparatus." This consists "of two recipients which communicate together by " means of an india-rubber pipe, supported by joining metallic " tubes and supplied with cocks, the purpose of which is to regu- " late or close any communication between both the receivers." The former called "a generator placed above the flame of a spirit " lamp or upon any blaze or fire, contains the water or medicated " liquid to be vaporized, the steam passing through the india- " rubber pipe gets into the latter" called "a saturator," which is " of glass, metal, or any ceramic matter, and contains the medi- " cinal mixture through which the steam devolves. On coming " out of the medicated liquid, the vapour is sucked up into " another india-rubber pipe or shank tipped with a mouth-piece " allowing the sick person to inhale the steam saturated with " medicinal principles. To the joining tube rising from the " generator is adapted a small valve which opens inwards to allow " a small quantity of air to be introduced at every aspiration into " the tube in order to facilitate the absorption into the stomach." This apparatus may likewise "be of use as a purger of foul air in rooms."

[Printed, 4*d*. No Drawings.]

A.D. 1862, June 18:—N° 1801. (* *)

NEWTON, WILLIAM EDWARD.—(*A communication from Pierre Nos d'Argence.*)—"Improvements in electrical brushes."

The "box or frame" of the brush contains an induction coil with adjustable core and vibrating armature, also a galvanic battery. The wires "forming the brush are set in a sheet of " caoutchouc, and are brought into connection with the current " by the interposition of a wire gauze." "The cover or handle " of the brush is either metallic, or is provided with a metal con- " ductor, so that the operator's hand forms a part of the circuit." The battery "consists of a gutta percha vessel provided with " blocks of carbon and zinc plates, and a space to contain the " chemical substance, which in this instance is the deuto-sulphate " of mercury. The battery and its accessories are covered up and " enclosed by a lid, which is secured in such manner that no " liquid can escape therefrom, so that the brush may without " inconvenience be held in any desired position."

[Printed, 8*d*. Drawing.]

A.D. 1862, June 24.—Nº 1858.

CLARK, William.—(*A communication from Pierre Ferdinand Leplanquais.*)—(*Provisional protection only.*)—" Improvements " in hernial and other orthopedic apparatus, and in pessaries and " other instruments." These are the mechanical arrangements made use of "for answering all requirements, still observing that " all are progressive in their action, or in other words, operating " by degrees. The necessary movements for a plain truss are " thirteen in number, namely, 1st, mobility of the dorsal pad on " the loins in every direction;" "2ndly, elasticity of the dorsal " pad;" "3rdly, elasticity of the pubic belt;" "4thly, facility of " lengthening or shortening the connecting parts of this belt;" " 5thly, extension of the spring on the back part;" "6thly, " shortening the same spring on the back part;" "7thly, increasing the power of the spring;" "8thly, lengthening the spring " on the front collar;" "9thly, shortening the same on the " front collar;" "10thly, inclination of the pad to facilitate the " fitting thereof on the hernial ring;" 11thly, reversing the pad " for obtaining a slight compression towards the pubis for the " purpose of preventing the slipping out of the hernia;" "12thly, " the drawing out of the pad so as to compress the abdominal " parietes for the purpose of preventing any intrusion of the " hernia within the channel;" "13thly, elasticity of the pad." The nine movements of a double truss "are exactly similar to " those first described, excepting the movements indicated under " the Nos. 1, 2, 3, 4, which are the same both in the plain and " double or complex trusses." To form the different parts of the truss dressed skins stretched are cut into strips and the strips are placed over "a plate of metal, wood, hardened india-rubber, " horn, gutta percha, or other rigid substance," and sewed by means of a sewing machine. Pads are formed "in the same " manner by introducing one, two, three, four, or more pieces of " wool, cotton, or other stuff of suitable form." "For invisible " trusses the strips of skin may be replaced by some waterproof " material, such as waxed or gummed taffeta, india-rubber, or " other suitable tissue either impervious or otherwise. The " cloth and stuffing materials are then superposed as usual." Mechanism is described "for drawing in the front pads of the " truss by degrees, whereby they may be varied in thickness and

" length some fractions of an inch," and for applying "the same " drawing-in mechanism to other similar apparatus, such as " pessaries," for instance, in a pessary for producing the instantaneous return of the basin, arranging on the collar of the pessary and opposite to each other two elastic cords, " or two india-rubber " tubes, or it may be one or more straight or spiral springs, by " whose action the basin is returned to its normal or horizontal " position from the vertical position it had assumed, in order to " facilitate its introduction," " so that any one can readily apply " this pessary in its right place." " The basin once in position " may be afterwards raised at certain periods as the cure pro- " gresses" by means of the arrangement described for hernial pads. " This reversal of the basin may likewise be obtained by " means of a non-elastic spring cat-gut, or by means of a flexible " plate of metal, one part of which not in connection with the " basin," passes through a hole made in the plate for the purpose. The same mechanical arrangement may also be applied " to the " rectum, and to umbilical apparatus, with such modifications in " size as may be desirable for suitable application thereto."

[Printed, 1*s.* 10*d.* Drawings.]

A.D. 1862, June 26.—N° 1879. (* *)

JOHNSON, JOHN HENRY (*A communication from Thomas Patten and Charles Mettam*).—" Improvements in the construction " of electro-voltaic platework for medical and other purposes."

"The essential feature of this invention is the forming of " articulated electro-voltaic platework in various sections through- " out the whole or major portion of its area by using two or more " tiers of negative plates in preference to one and interposing " between such plates a series of 'positive' plates or by using " two or more tiers of 'positive' plates and interposing between " them a series of 'negative plates. The upper and lower plates " should be so divided and kept separate longitudinally and " transversely as to establish a multiplicity of 'negatives' and " 'positives' with their contiguous edges exposed and breaking " contact. The several sections of the 'positive' and 'negative' " plates are connected or hinged together by a flexible insulat- " ing strip or strips of india-rubber or other suitable material " united to the sectional plates by metallic or other eyelets. But

" in order to give a more united character to the whole, and " facilitate the manufacture, it is preferred to connect the sections " of plates by a single insulating strip made with perforations or " openings therein so as to be of a skeleton form and admit of " the 'positive' and 'negative' plates, or rather those sections " which lie one under the other coming into contact and establish- " ing electrical action between or by the said plates or plate " sections."

The Specification describes, and the Drawing shows, this invention applied to a "galvanic" "inner sole to be worn inside " boots or shoes."

[Printed, 8*d*. Drawing.]

A.D. 1862, July 12.—N° 2011.

PLASSAN, PIERRE.—(*Provisional protection only.*)—"An im- " proved orthopædic apparatus for straightening the human " frame." This consists "of a belt of some strong woven fabric, " which is placed on the pelvis above the trochanters," made " in two pieces more or less closely brought together at the back " by a couple of straps or a lace. The two anterior or fore parts " of each of these pieces have eyelet holes or buckles, and thick " pads are so placed inside the belt as to press on the inguinal " region with the ilium, where the inguinal bandage is made to " press in cases of the hernia so called; by this means the belt " is prevented from turning and unpleasantly pressing or squeez- " ing the hypogastric region. Where the body is inclined to " bend, and it is desirable that the head should be inured to an " upright position, it is necessary to aid the muscles which hold " it up,l' and for this purpose using "several india-rubber rings, " fixed by a cord, or otherwise, on the upper part of two upright " pieces, and which are also connected with a circular band sur- " rounding the head beneath the hair." By "the aid of an elastic " band fixed at the end of one of the upright pieces passed over " the shoulder, and then attached (more or less close to the belt) " to the upright piece on the side opposed to the shoulder over " which it passes" is obtained "a traction which, while co- " operating with the X-rest in raising the head, also aids in keep- " ing in the dorsal projection, and brings back the spinal column " when it is distorted." Lastly, "by the aid of a piece or plate

" of leather applied on the projecting part of the breast, and " which is attached to the upright on that side where there may " happen to be a hollow or sinking " the body or trunk is brought as much upright as possible.

[Printed, 4*d*. No Drawings.]

A.D. 1862, July 21.—N° 2075.

CLARK, WILLIAM. — (*A communication from Achille Barborin*). —"An improved pomade *or balsam*." This is termed "balm " Achilles," and is composed of "resin and gallipot, white fat " and suet, virgin and yellow wax, fine olive oil, camphor, white " soap, benzoin, spirits of wine, essence of lavender." These matters "are mixed together, the solids being dissolved in the " liquids so as to form a homogeneous composition. This odoriferous cosmetic is first melted and then applied by friction." This pomade or balm, it is said, "is especially applicable for the " cure of all kinds of wounds or sores by rubbing them externally " therewith."

[Printed, 4*d*. No Drawings.]

A.D. 1862, August 8.—N° 2220.

SIROU, JEAN.—(*Provisional protection only*.)—"A new medi" cinal preparation for internal and external application." It is composed "of the following plants, culled when at maturity, and " in possession of all their aroma, both flower and leaf being " used unless one or other be specially indicated; 1, mentha " viridis; 2, artemesia foliis pinnatifidis; 3, hypericum perfora" tum; 4, lavandula spicata; 5, achillea millefolium; 6, hype" ricum fuga dæmonum; 7, plantago arenaria; 8, hyssopus " officinalis; 9, thymus serpillum; 10, thymus vulgario; 11, " teverium foliis coractis undulatis; 12, artemesia, absinthium; " 13, salvia officinalis; 14, fœniculum officinale; 15, anethum " fœniculum; 16, apium petroselinum; 17, borrago officinalis; " 18, lilium candidum; 19, flores sambuci; 20, spirea ulmaria; " 21, flores tiliæ parvifloræ; 22, flores rosarum centifoliarum; " 23, flores citri medicæ; 24, rosmarinus officinalis; 25, verbena " officinalis; 26, santolina; 27, Angelica; 28, lythrum salicaria; " 29, anthemis pyrethrum." The flowers and leaves above enumerated are placed in a glass vase or bottle, mixed in about equal proportions, pressed down gently with the hand, and covered with wine brandy, the vessel closed, and the whole macerated and steeped "at an ordinary temperature during thirty days," and the liquid filtered is ready for use. "It may be applied with a linen "rag or sponge to the skin, or rubbed in, or it may be taken "internally, one large table spoonful to an adult and a tea spoon-"full to a child. If possible the whole of the above-named "plants should be used, but the absence of one or two will but "slightly effect the medicinal properties of the liquid."

[Printed, 4*d*. No Drawings.]

A.D. 1862, August 13.—N° 2271. (* *)

BOYLE, William Lafferty.—"Improvements in the con-"struction of chairs and footstools for the use of dentists, and "in chairs, couches, and beds for invalids." The chair back is hinged to the frame at or near its lower end and fastened to the arms by straps or chains. Extending across the back is a shaft to which one end of the straps is secured; the shaft carries a coiled spring and a ratchet wheel whose spring pawl has its outer end projecting from the back of the chair. The head rest is attached by two hinges through which a bolt passes; the bolt has at one end a feather which slides through a groove in the upper half of the hinge next to it; at the other end is an adjustable screw button. In the lower half of the hinge are notches into any one of which the feather enters and is retained there by a spring coiled round the bolt and compressed between the hinge and a pin on the bolt. This arrangement allows of a lateral movement to the head rest while its inclination is being adjusted. The seat box slides up and down within the chair frame; it is carried at front and back by levers pinned at top to the box and at bottom to "two travelling bars or screw boxes;" radius rods are jointed, one to the middle of each lever and to the chair frame or to a cross bar. A shaft, one half cut with a right, the other with a left-handed screw, passing through the cross bars and screw boxes, turns in bearings on the frame; by this motion the screw boxes recede or approach, and "the seat will be caused to rise or fall in "a perfectly vertical line." A spittoon can be attached to the chair; it is placed at the end of a frame mounted on a bracket which may have a folding joint. An india-rubber pipe leads from the spittoon to a vessel under the chair. A footstool is composed of "two halves of a box sliding one within the other;"

the upper, resting on helical springs, has hinged to it a cover which is held at any inclination by a spring catch and rack. The height of the stool is adjusted by pulling a cord tied to two levers whose fulcra are carried by brackets inside the upper half, while the racks into which the lower ends of the levers take are fixed inside the lower half. The upper part of the chair is cut away and the legs are curved behind, "to enable the operator to get "closer to the patient."

[Printed, 10*d.* Drawing.]

A.D. 1862, August 14.—N° 2292. (* *)

HEARN, James.—"Improvements in apparatus or appliances "for raising sick or bedridden persons in their beds, and for "lifting their bed clothes." The apparatus is composed of, 1, four uprights supporting a horizontal frame, all tied by cross bars and diagonal stays; 2, a stretcher frame sliding on the uprights and suspended by cords which pass over pulleys on the horizontal frame and thence round pulleys down to a lever frame—this frame is mounted on fulcra in the uprights and is furnished with toothed quadrants and pawls—and, 3, belts (whereby "the patient is slung "to the frame") looped to pins on the stretcher frame. The stretcher "is kept rigid in its breadth" by cross bars, one of which is of curved iron to provide room for elevating the patient's head and shoulders. The stretcher may be omitted and the belts be looped to hooks on the ends of the cords; in this case two extra cords are placed near the head, "separately attached to a hand "hold." This contrivance for lifting the head may be added to the first arrangement, if the stretcher frame "be jointed in its "length."

[Printed, 8*d.* Drawing.]

A.D. 1862, September 6.—N° 2464.

DUNCAN, Emma Louisa.—"Improvements in the manufacture "of splints." These are said to be "the application of cane to "the manufacture of splints," substantially as follows:—It is proposed "to form splints of a strong fabric padded with wool "or cotton wadding, or with layers of any soft fabric, or the padding may in some instances be dispensed with," and also to "apply and fasten to the back of these splints (in order to main-

" tain their position and strength) any kind of cane, such as " ratan, bamboo, or jungle cane, either split or entire, and in " longitudinal rows or layers, the cane being sewn in under the " material forming the back of the pad, and thus presents a fluted " or grooved surface; or the cane may be wound or interlaced so " as to unite their series in a parallel position, and thus obviate " the necessity of padding." In making cradles or slings for the arm applying "cane at the back thereof instead of leather, gutta " percha and india-rubber, the seating of the elbow only to be " made in the ordinary manner with metal; or it may be formed " of blocked leather, gutta percha, or other plastic material which " will become firm or solid after the process of manufacture."

[Printed, 4*d*. No Drawings.]

A.D. 1862, September 12.—N° 2513.

THOM, James. — " Improvements in mounting or fitting " artificial teeth." These are as follows:—" A model of the " mouth to which the teeth are to be fitted having been taken in " wax (or other plastic material), and the artificial teeth placed " in their proper positions, a cast is taken therefrom in plaster " of Paris in the usual manner. After this mould has become " hard, the wax is removed, and its place supplied with a mixture of india-rubber and sulphur, which is heated to a temperature of about 330° F., when the india-rubber becomes semi- " fluid, and takes the form of the mould, at the same time it " becomes vulcanized and hardened." In cooling, the vulcanized rubber is found to shrink and become distorted, and does not fit the mouth, and to remedy this defect constitutes this invention. It is accomplished as follows:—" Having trimmed the vulcanized " indian-rubber and made any necessary corrections thereto," it is replaced " (the teeth being imbedded in their proper positions) " in the plaster mould, within a metal collar of a conical shape, " which by means of a screw press brings the parts of the plaster " mould into close contact with each other, and with the vulcanized indian-rubber." While subjected to this pressure it is heated to about 220° F., " which so far softens the vulcanized " indian-rubber as to cause it to conform itself strictly to the " mould. In this state it is left to cool and harden; on being " taken out it retains the true form of the mould, and accurately " fits the mouth from which the original model was taken."

Although this process is described "as being applied to vulca-" nized india-rubber, it is also equally applicable to any other " vulcanized vegetable gum."

[Printed, 4*d.* No Drawings.]

A.D. 1862, September 23.—N° 2600.

WILKINSON, William.—(*Provisional protection not allowed.*) —" Improvements in the manufacture of knitted elastic fabrics, " and in the machinery employed therein." These are, in reference to this subject, for making surgical stockings and knee caps, in stocking or other knitting frames, dispensing with "the use of the jack or tickler, or point machine," and improving "the frame or knitting machine, or stocking frame " by fixing additional levers to the sinker bar that contains the " lead sinkers," and fixing the sinker bar in upright levers. " An " inclined spring is provided to let down the sinker bar and " sinkers upon the caoutchouc thread placed on the needles and " underneath the nibs of the jack sinkers during the interval. " The lock is placed upon the jacks, and the sinker bar is forced " down." "To regulate the power of the lead sinker bar and " sinkers, they are placed under the control of stars and star " levers."

[Printed, 4*d.* No Drawings.]

A.D. 1862, September 26.—N° 2627.

ABEL, Charles Denton.—(*A communication from Johann Georg Popp.*)—" A new or improved purifying and preservative " lotion for the mouth." This is prepared as follows:—One ounce of the following ingredients are first mixed together, namely, " cochlearia, vine tendrils, rose leaves, pyrethrum, " pounded Peruvian bark, earth moss, and scraped horse radish;" to these are added "thirty-two ounces of alcohol, of eighteen " degrees strength, and thirty-two ounces of distilled water. " This mixture is allowed to stand for about a fortnight in a " warm place;" and at the end of this time are added " to the " mixture one ounce of root of anatherum, and one ounce of " powdered cloves;" it is again left to stand for another fortnight or three weeks, shaking it up frequently during that " *time.* The fluid portion of the mixture is then separated by

" filtration, and to this is added two ounces of myrrh, two ounces " of tincture of guajuci, and two ounces of tincture of cinnamon. " The lotion is then bottled, and is fit for use."

[Printed, 4*d*. No Drawings.]

A.D. 1862, October 14.—N° 2769.

CARTWRIGHT, MATTHEW.—" Improvements in plates for " artificial teeth." These are said to be, manufacturing such plates of a composition of gold and gutta percha or india-rubber, also of a composition of sulphuret of zinc and kaolin, as follows:—In combining leaf gold or finely precipitated gold with india-rubber or gutta percha; the india-rubber or gutta percha is first dissolved, and "the gold leaf ground with the " same, in order effectually to combine the metal with the gum " used." Afterwards heating this compound to render it plastic, and shaping the plate by working it over or into a mould or model of the plate to be produced." "In forming plates of a " combination of sulphuret of zinc and kaolin," these substances are " reduced to a liquid state," and " applied in successive layers " upon the model of the plate to be produced until a sufficiently " thick plate composed of such layers is formed." " In some " cases, for affording additional strength to the plates," intro- " ducing " some fibrous material or metal gauze."

In the Provisional Specification this invention is said also to consist "in building up or forming plates for artificial teeth by " coating a model of the plate to be produced with successive " layers of gutta percha alone or combined with other substances " until a sufficiently thick plate has been formed," every coat being set or hard before the next is applied, and then submitting " the finished plate to any curing process that may be necessary " to make it sufficiently hard for wear."

[Printed, 4*d*. No Drawings.]

A.D. 1862, October 17.—N° 2806.

KENNEDY, WILLIAM SADLER.—" An improved method of, " and apparatus for, applying fomentations and other external " remedies to the throat." This consists "of a semicircular " metallic chamber, or one made of earthenware, china, glass, or " other material, and fitted to the form of the throat." Before being applied it is filled with hot water through a plug in the side. By means of a " soft thick padding of flannel or spongio " piline attached to the inside, top, and base," the " patient is " protected from undue heat and receives a constant supply of " comforting warmth and moisture, the padding having pre- " viously been sprinkled with warm water. The breadth of the " chamber is increased towards the base, so as to extend the heat " to the pit of the neck." The padded lining is attached by straps and buttons, and " can be instantly detached for clean- " sing." There are loops to receive the attachments, which are passed round the neck and tied in front. In the Provisional Specification there is described a base for resting on the chest.

[Printed, 8*d.* Drawings.]

A.D. 1862, October 27.—N° 2891.

RIDGE, JOHN JAMES.—" Improvements in treating certain " farinaceous substances applicable to infants' or invalids' food, " and in apparatus to be employed therein." These are, " treat- " ing and imparting medicinal properties to wheaten flour, oat- " meal, indian corn, rice, or like farinaceous substances, and " obtaining therefrom a purer and more nutritious food applicable " for infants or invalids," and consists in subjecting such " sub- " stances to a roasting or drying process contained within closed " cylindrical vessels or chambers, surrounded by and maintained " under heat uniformly for about six hours to the temperature " of boiling water, steam, or otherwise, suitable outlet pipes or " passages in the apparatus being provided for the escape of " vapour or gases evolved during the process. The ingredients " thus prepared" are to be rolled, sifted, and pounded until they have become perfectly smooth, when they are mixed with bi-carbonate of soda in the proportion " of two drachms to a pound " of the cooked flour, to which also half an ounce of powdered " lump sugar is to be added, and thoroughly incorporated there- " with, when the whole is ready for use."

[Printed, 8*d.* Drawing.]

A.D. 1856, November 26.—N° 3172.

FOVEAUX, JOSEPH FRANCIS.—(*A communication from Amatus Luer.*)—(*Provisional protection only.*)—" Improvements in appa- " ratus for pulverizing or dividing liquids into spray." These are, " a syringe barrel with a contracted outlet leading into, by

" preference, a flexible metal tube; but any other tube may be " used, on the outer end of which a nozzle is screwed or other- " wise fitted. The aperture in the nozzle is more or less con- " tracted according to the distance to which the spray is to be " projected, and to the degree of fineness required. Inside the " syringe barrel a piston is fitted, and is worked by a screw " piston rod passing through a threaded nut in the cover of the " barrel. The apparatus is applicable to medical, horticultural, " and other purposes where liquid in minute spray or in a state " of dew is desired."

[Printed 4*d*. No Drawings.]

A.D. 1862, November 28.—N° 3189.

JOHNSON, JOHN HENRY.—(*A communication from Edmond Langlois.*)—" An apparatus for indicating the pressure of electric " conductors in foreign bodies." This consists, in reference to this subject, in apparatus " for the finding and extraction of pro- " jectiles or metallic substances in and from wounds," and is composed " essentially of a hollow sounding or testing rod, " within which is placed so as to move to and fro another rod, " which in all cases is insulated completely from the outer tube " or sounding rod." The poles of a battery are connected with each of these rods, and " with either of these parts there is also " connected so as to be in the electric circuit a small electric bell " or signal and galvanometer." If this apparatus be now inserted into the wound, when the extremity of the tube comes in contact with or strikes the resisting body, the inner rod is released, and descends until its extremity comes in contact with the same body, and the body being metallic a current of electricity will be established, and the bell will ring. The extremity of the apparatus must be specially adapted to the purposes to which it may be required; as for surgical purposes two or more rods or arms are introduced into the wound, with curved surfaces, so as to surround and lay hold of the metallic substance, which may then be withdrawn.

[Printed, 8*d*. Drawing.]

A.D. 1862, November 28.—N° 3196.

ADAMS, JAMES, and WHITE, WILLIAM CORNWELL.—" Im- " provements in apparatus for boiling and evaporating." These are said to be, "the application of the coil of pipes or other " equivalent between the two pans, the application of the plate " between the pipes and outer pan, and the arrangements for " weighing the contents thereof and carrying off the water of " condensation," substantially as follows:—A copper or other metal pan is constructed with a false bottom, and supported by means of trunnions set in bearings on standards, and a circular, spiral, or other form of perforated tube is fixed in the interior of the pan, and is " supplied with steam from a boiler, or with hot " air which enters at one of the trunnions formed hollow for the " purpose." " From the bottom and interior of the hollow pan " a pipe ascends to the opposite trunnion in order that the water " of condensation may be forced up the pipe by the pressure of " the steam, and driven out of the pan. When a great degree " of heat is required, the foregoing arrangement is modified, and " superheated steam is employed. In this case a coil of pipe is " applied in the hollow space between the pans or vessels, the coil " being perforated as before." " Below the coil and intervening " between it and the bottom of the outer pan, a bent plate, " according to the shape of the vessel, is to be fixed in order to " concentrate the heat upon the upper or false bottom thereof," an extremely high heat is thus obtained. The pan is balanced on a fulcrum of a V or pointed form, resting on a groove in the standard or framework; the short arm of a lever is held down by a rod connected to a regulated spring balance indicator, by means of a lever of the second order, to the centre of which a segmental series of teeth are attached, gearing with a vertical rack operating a pinion attached to the indicating pointer on the dial. This apparatus is used among other purposes for " preparations from " drugs and chemicals."

[Printed, 8*d*. Drawing.]

A.D. 1862, December 2.—N° 3237. (* *)

CAUTLEY, Richard Kingsman. — (*A communication from Mark House.*)—(*Provisional protection only.*)—" Improvements " in electro-thermal baths."

The " bathing tub " contains " a non-conducting net basket or " tray suitable for containing the body of the patient." " Two " revolving metal frames, similar to crank axles, with their centre " *of motion* in the centre of each end of the bathing tub, are con-

" structed and arranged to rotate freely in the space between the " sides of said tub and basket without interfering with one " another." An insulated moveable "plate," "conductor," or " pole," is fixed "on the outside of each of these frames." "Upon " the end of a short flexible conductor extending from each of " these poles a sponge is attached. By rotating the frames, and " changing the position of the moveable plates on the frames, and " consequently the two poles, the current of electricity may be " readily controlled or passed in any direction through the con- " ducting medium. When either of the poles are brought by the " rotation of the frame above the waterline, the current will pass " to the sponge, which can be readily carried to the desired part " of the body by the patient or attendant. One end of the bottom " of the net basket or tray is an incline to support the head of the " patient. Upon the under side of this incline is hinged a metallic " plate conductor, which is constructed so that the same may be " brought in contact with the said incline, or removed therefrom " in order to regulate the degree of intensity of the electric current " passing upon the head and neck without changing the quantity. " This plate is supplied from the same generator as the poles."

[Printed, 4*d*. No Drawings.]

A.D. 1862, December 6.—N° 3280.

JOCE, JOHN.—(*Provisional protection only.*)—" An improved " composition or compositions for producing artificial sea-water, " or the odour or effects of sea-water." For the above composition or compositions using a pound of bay salt, a drachm of iodine, a drachm of iodide of potassium, six minims of bromine, one teaspoonful of alcohol. The process preferred to be adopted is this :—The iodine and iodide are dissolved in, say, half a pint of water, and the bromine is added to the solution kept stopped " to prevent evaporation or escape of the volatile contents ;" also " kept in the dark to prevent decomposition by light." The bay salt (1 lb.) is put into a bottle capable of holding double that quantity, and a teaspoonful of the iodine and bromine mixture is added with agitation, at a time, until a " perfect admixture of the " whole " is obtained. " The alcohol is then added, which pro- " duces colored crystals." " For bathing :—Dissolve a teaspoon- " ful of the crystal with a handful of salt in a quart of water, and " add this solution to a sufficient quantity of water for a hip,

" sponge, shower, or douche bath; a bath for total immersion " will require two pounds of salt and a tablespoonful of the " crystals." " For deodorizing, disinfecting, or tonic purposes:— " A teaspoonful of the crystals put into a saucer will readily " pervade a moderate-sized nursery or bedroom with the odour of " the sea coast. The process may be repeated daily; at the same " time proper ventilation should be maintained." " For com- " presses to be applied to the throat, body, or extremities:— " Dissolve a teaspoonful of the crystals with a quarter of a pound " of salt in three quarts of water, and wet the compresses with " the solution." Another composition or modified form of the above is made by mixing ten minums " of the mixture described " " with two ounces of bay salt crushed." "This would be used " for olfaction or inhaling in smelling bottles, affording the aroma " of the sea coast."

[Printed, 4*d*. No Drawings.]

A.D. 1862, December 8.—N° 3292. (* *)

HUGHES, EDWARD THOMAS.—(*A communication from Johann Jacob Dahms and Albert Rudolph Wittig.*)—" Improvements in " galvanic apparatus." " These consist of various improved " arrangements of galvanic apparatus adapted to every part of the " human body." When applied to the head, a wig spring is employed. An element or galvanic pair of silvered copper and zinc is attached to each extremity of the said spring, so that the galvanic current from each element proceeds in the same direction " through the head." A shallow cavity is formed in the plates next to the head for the reception of moistened flannel. " At " the top of each cavity there are holes;" one for the supply of exciting fluid, the other for the escape of air; these holes are closed " when the cavity is filled."

In an apparatus " for passing a galvanic current through the " body from the foot to the wrist or other required parts," the two elements are joined by a wire " of any suitable length, and " placed within an india-rubber tube." Silk ribbons are used to fasten the elements and the tube suitably about the body.

When a galvanic battery is " to be moistened when attached to " the body," it is placed within an india-rubber tube, " the ends " of which are closed air and water tight by plugs or bungs." The battery poles are passed through their respective plugs and connected to zinc and silvered copper plates respectively, which act as conductors, "there being an interrupter between the plate "and pile when interruptions of the galvanic current are required. "In the plug at the positive end there is an opening provided "with a stopper, through which opening the tube may be filled "with acid and afterwards emptied."

[Printed, 10*d.* Drawing.]

A.D. 1862, December 9.—N° 3299.

BROOMAN, RICHARD ARCHIBALD.—(*A communication from Frumence Nicolas Frezou.*—(*Provisional protection only.*)—"Improvements in treating liquorice root to obtain liquid and solid "extracts therefrom." These are, making "the extracts, whether "liquid or solid, without any apparent color and without the "tart flavor" as follows:—The root pulverized is thoroughly exhausted by cold water, the liquid boiled for about ten minutes, and the coagulated matters retained upon a woollen strainer, and the liquid filtered through animal black, "may be evaporated to "any desired consistence, allowed to cool gradually, when it "becomes a pretty firm mass, and may be made into sticks or "other forms;" or instead of the treatment just described, adding to the first liquid while hot "a solution of an acid, citric acid by "preference, or acid salts, such as bisulphates of potash." The coagulated mass is allowed to cool collected on a filter, and the paste washed in cold water, or any slight excess of acid is neutralized by bicarbonate of soda, taking care not to employ any excess of salt. "The product is slightly dried to bring it "into a solid state. It may be used in its solid state, or in the "preparation of drinks, syrups, jellies, candies, and otherwise."

[Printed, 4*d.* No Drawings.]

A.D. 1862, December 18.—N° 3390.

SAVORY, JOHN.—(*A communication from John Roberts.*)—"A "new or improved apparatus for the inhalation of medicinal "powders or vapours for the treatment of diseases of the throat "and lungs." This consists as follows:—On a standard is mounted "a vertical tube, the lower part being closed. At or "near the bottom of this tube a number of apertures or perforations are to be made, which are to be enclosed by a collapsible "india-rubber bottle or air vessel; the top of the tube supports

" a mouth-piece, formed either in wood, ivory, or metal. At the " the side of and in communication with which is a hollow globe " or vessel having an opening for the insertion of the powder, " the opening being closed by a screw cap; the globe or vessel " receives the air tube at its lower part, and the powder is pre- " vented from falling into the tube by a ball or non-return valve; " the communication between the powder receptacle and the " mouth-piece is established by the medium of wire gauze, or " other perforated fabric, which prevents any particles of powder " except of the finest nature from entering the mouth-piece." " The mode of using the instrument is as follows:—Having " introduced the powder into the receptacle, the mouth-piece is " put into the mouth near by to the throat, the mouth being kept " wide open; then a full inspiration should be taken, and at the " same instant the india-rubber bag should be pressed quickly; " by these means the powder or vapour will be made to penetrate " to the throat, larynx, wind-pipe, and air passages of the lungs." In order to act upon vapours, such as the vapour of stramonium or resinous vapours, they are placed in a vessel with water, and the vessel is heated by a spirit lamp, "a tube ascends from the " top of the vessel to the mouth-piece; the air tube enters the " mouth-piece in the form of a funnel or horn, the open end " being nearest the mouth of the patient, and being in some " cases furnished with a rose." The foregoing apparatus is simplified when desired "by dispensing with the stand and using " the collapsible bottle, the flexible tube, the receptacle, and the " mouth-piece as described."

[Printed, 4*d*. No Drawings.]

A.D. 1862, December 26.—N° 3455.

SWAINSON, John, the younger. — "Improvements in the " manufacture of pill-boxes and similar boxes from solid wood, " and in machinery to be employed in the said manufacture." These are, cutting the wood into lengths somewhat greater than the length of the boxes to be made, when they are put into a holder "carried in an upright fixed on the end of a horizontal " slide, working on a dovetail on the bed of the lathe or machine. " The lower half of the holder is dropped into a recess made in " the said upright to receive it, and the upper half of the holder " is fixed, in a vertical slide working on a dovetail in the said

" upright. By means of a screw and handle the said slide " carrying the moveable half of the holder can be raised from " or brought down upon the fixed half of the upright. A short " cylindrical length from which a box or lid is to be made is " placed in the lower and fixed half of the holder; the moveable " half is then brought down upon the said fixed one, and the " wood length securely held in the said holder. A rapid rotatory " motion being communicated to the boring bit, the slide carrying " the upright, and in which the holder is fixed is moved forward " on its dovetail by means of a handle, and the wood length in " the holder pressed against the rotating boring bit, and the " inside of the said wood length bored or cut out by the said " bit. The required depth of boring having been effected, the " slide is moved from the boring bit, and the box or lid removed " from the holder by means of a rod which passes through the " back of the said holder. The machine may either work horizontally or vertically. Holders of the kind described having " different diameters are employed with corresponding sized " boring bits to manufacture different sized pill and similar " boxes."

[Printed, 10*d*. Drawing.]

1863.

A.D. 1863, January 1.—N° 1.

COLLYER, Robert Hanham.—" Improvements in the method " of and apparatus for preparing materials for the manufacture of " paper and similar purposes, part of the invention being also " applicable to other operations in which materials are subjected " to the action of hot agents. These are, in reference to this " subject, in extracting " the active principal of medicinal plants " by acting " on materials by intermittent showers of hot water or " other hot liquids, at the same time keeping the materials in a " state of motion and separation and acting on them continuously " by ascending currents of superheated steam or hot air, or both " such steam and air," whereby the active principle and other " portions of plants " are rapidly separated. " The showers of " hot water may be alternated with showers of other hot liquids."

The apparatus in which the foregoing operation may be performed consists "of a close horizontal or longitudinal receiver, through " which passes a hollow or tubular horizontal axis carrying per- " forated hollow arms, forked or otherwise, conveniently shaped " for agitating the materials."

[Printed, 10*d*. Drawing.]

A.D. 1863, January 1.—N° 4.

BOWRA, MATTHIAS EDWARD, and FRANCIS, ARTHUR EDWARD.—" Improvements in the manufacture of elastic fabrics." These are, first, causing sheets of india-rubber or of any suitable elastic gum "to be distended in or upon frames or tables in which " the said sheets are prevented from contracting crosswise, at the " same time that they are distended lengthwise, and vice versa; " and while these sheets are in this state causing, by means of " rollers or otherwise, any fabric made of cotton, wool, silk, &c., " to adhere to them, by means of a suitable adhesive elastic " solution, such fabric being also first distended lengthwise, but " allowed to contract crosswise." These sheets are then "released " from their tension and allowed to contract. By this means a " fabric is produced possessing elasticity in all directions."

Second, fabrics of wool, silk, cotton, alpaca or other materials are distended lengthwise, and so contract crosswise, and when so distended and contracted, they are covered with a coating by a spreading machine, rollers, or otherwise, of india-rubber or other elastic gums, applied either in solution or sheets or otherwise. " The article produced by the materials thus combined will possess " elasticity in a crosswise direction." It is proposed to apply these elastic fabrics to, among other purposes which are named, surgical or other bandages, and when required the combined materials are ventilated and vulcanized in the ordinary manner as is described in No. 2779, A.D. 1861. These fabrics "being " previously printed, impressed, or otherwise ornamented" if required.

[Printed, 4*d*. No Drawings.]

A.D. 1863, January 13.—N° 100.

LEWIS, THOMAS GEORGE. — (*Provisional protection only.*)— " Improvements in apparatus applied to perambulators, invalid " chairs, and other carriages." These are, using "a frame

" adapted and fixed to the back of the carriage, and so as to be " immediately behind the back " of the person. Mounting upon the same "two iron rods on which are sliding sockets which slide " up and down thereon; to these sockets are fitted by joints two bent arms which when moved to the backward position have free " ingress and egress to and from the vehicle, but when brought " forward come across the chest " or other part of the " person " intended to be supported." Binding screws are fitted to the sockets so as to permit of the adjustment and fixing of the arms in their forward or backward position, or a strap and buckle or other connection may unite the arms at the front. " The arms, " in preference, are made of metal with a curve for resting the " arms and stuffed. " Instead of the upright bars carrying the " sliding sockets being on a separate frame they may be fixed to " the back of the carriage."

[Printed 4*d*. No Drawings.]

A.D. 1863, January 17.—N° 152. (* *)

ASHE, Isaac.—" Improvements in apparatus for preventing sea " sickness;" namely, " suspended and balanced chairs, couches " and other supports." A standard with one or more curved branches is secured to any suitable part of the vessel. At the outer end of each branch is suspended a rope, chain, or other flexible material, to the bottom of which is attached " the rigid " framework " of a chair. Instead of a rope " a ball and socket " joint, or a ball and ring or washer joint, may connect the chair to the branch. A balanced chair rests on either joint before named on the top of a pedestal or standard, " either with or with- " out the intervention of springs." On the legs, or on a platform formed thereon, are placed " washers or rings of metal, of sufficient " weight to keep the centre of gravity of the support for the " person below the point at or on which it is balanced."

[Printed, 8*d*. Drawing.]

A.D. 1863, January 20.—N° 176.

BLACKWELL, Samuel. — " Improvements in apparatus for " applying water or other fluid to the legs and other parts of " horses and other animals." These are, employing " a hollow " tube or band (which, by preference, is composed of vulcanized " india-rubber)." " This is perforated with numerous small

" holes and the ends are closed" and "a flexible supply pipe is " connected to the hollow perforated band or tube, whilst the " other end of the supply tube is connected to a vessel containing " water or other fluid." "The supply tube may have a valve or " cock." The vessel containing the water or fluid is "arranged " to be fastened on the back or other part of a horse, or it may " be otherwise placed and supported when circumstances require " it." When desired a sponge or other porous and absorbent covering may be placed and secured over the part. Like apparatus suitably modified in form is also applicable when making local applications of water or other fluid to the legs, arms, or other parts of the person of a human being.

[Printed, 1*s*. Drawings.]

A.D. 1863, February 4.—N° 316.

MARVILLE, Louis Joseph Henry.—"A new kind of covering " for the ears made of india-rubber, gutta-percha, or other " materials." This covering, usually made of india-rubber, is moulded to the external shape of the ear; "as regards the inner " face of the 'auricle' the ear cap or covering could not so " rigorously follow its inclination backward, its eminences and " its hollows disposed inversely to those appearing on the external " face, because this part submits to the modifications incumbent " to the use to which it is destined. A border, more or less broad, " turns over on to the back of the auricle, and serves to hold " the apparatus on to the organ it is to cover." A number of diseases are named which it is said may be prevented and often be alleviated by the use of these ear caps. In the Provisional Specification it is stated that they should be of the same color as the flesh, lined with silk, and "can have one or several small holes " for ventilating in order to avoid too great heat."

[Printed, 4*d*. No Drawings.]

A.D. 1863, February 7.—N° 343.

SIROU, Jean.—(*Provisional protection only.*)—"A new medi-" cinal preparation for internal and external application." This " is composed of the following plants, culled when at maturity " and possession of their aroma, both flower and leaf being useless " unless one or other be specially indicated: 1, Mentha vividis; " 2, Artemisia foliis pinnatisidis (vul. mugwort); 3, Hypericum

" perforatum; 4, Lavendula spicata; 5, Achillea millefolium; " 6, Hypericum fuga demonum; 7, Plantago arenaria; 8, Hissopus officionale; 9, Thymus serpillum; 10, Thymus vulgaris; " 11, Tencrium folus cordatis undulatis; 12, Artemisia absinthium; 13, Salvia officionale; 14, Fæniculum officionale; " 15, Anettrum fæniculum; 16, Assium petroselinum; 17, Borrago officionale; 18, Lilium candidum; 19, Flores sambuci; " 20, Spirea almaria; 21, Flores tilia parvifloræ; 22, Flores " rosarum centi foliarium; 23, Flores citri medicæ; 24, Rosmarimus officionale; 25, Verbena officionale; 26, Santolina; " 27, Angelica; 28, Lythrum salicaria; 29, Arthemis pyrethrum." Equal proportions of the above flowers and leaves mixed are put into a glass vase or bottle, pressed gently down with the hand covered with wine brandy and the whole left "to macerate and " steep at a moderate temperature during thirty days," when the liquid is filtered and "is ready for use. It may be applied with a " linen rag or sponge to the skin or rubbed in, or it may be " taken internally."

[Printed, 4*d*. No Drawings.]

A.D. 1863, February 9.—N° 360.

ROOFF, William Brown.—(*Provisional protection only.*)—" An improved respirator." This is said to consist of a respirator, partly an improvement upon that described in No. 12,273, Old Law. "The inlet tubes or passages are made to communicate with " a chamber or receptacle, into which can be placed at pleasure " air, purifying materials, or a piece of sponge or other suitable " material for holding medicinal preparations which impregnate " the atmosphere before entering the lungs." A system of valves is used, similar in action to those described in No. 12,273, "by " which the exhaled air is not allowed to pass through the " chamber containing the medicinal or purifying agents, but " gives up its heat to the metal tubes, which heat warms the " inspired air before it reaches the purifying or impregnating " chamber on its way to the lungs."

[Printed, 4*d*. No Drawings.]

A.D. 1863, February 12.—N° 379.

OPPENHEIM, Frederick. — (*Partly a communication from Edouard Billard.*)—(*Provisional protection only.*)—" An improved

" other similar articles of confectionary." These are first, making use of a number of (larded or oiled) boards or plates, in preference of or coated with gutta percha, on which the paste is spread out, of the thickness required, the upper surface of the sheet of liquorice is also larded or oiled. These boards or plates with the material are placed on a moveable platform, and passed in succession under reciprocating stamps and cutters, also lubricated. Sometimes the boards are passed under rollers having stamps, and sometimes " the cutters are of a hexagonal form, so that the sheet " is entirely used up without leaving a web." The boards having the cut out, &c., materials are then placed in a heated room.

Second. Two rollers, in one of which are recesses the size, &c. of the cakes engraved thereon, around the other, which is plain, is an endless board of metal, &c. which is kept in close contact with the figured roller by the plain roller, and the paste being placed in contact therewith is drawn between the rollers, and forced into the recesses previously larded and oiled, the formed cakes adhere to the endless board and are carried forward into chambers in which is a current of air, heated or otherwise, and dried. In place of making the dies or moulds fixed making them moveable, and in place of forming and drying the cakes on an endless board or sheet as above, using boards, sheets, or plates, of any suitable size or material.

Third. In making liquorice rolls, sticks, and pipes, the liquorice material is made as is described in No. 356, A.D. 1862, but drier than that now used, it is first made into sheets, and then formed into rolls or sticks by passing through grooved, rollers and into pipes by having a fixed mandril or mandrils in the grooves between the rollers, and using two sheets, one above the other, &c. Liquorice rolls are now sometimes made by forcing the paste out of a tube or receiver through holes, the improvement in this is, placing a solid or tube mandril in each hole, and forcing the liquorice paste out between the die and the core or mandril.

[Printed, 6*d*. No Drawings.]

A.D. 1863, March 6.—N° 636. (* *)

WILSON, Alfred.—" The better and more commodious manu-" facture of all kinds of easy, lounging, and invalid chairs, seats, " or settles." This invention consists " in the application of " hammered or tempered steel, iron, vulcanized india-rubber, or

" any other kind of accumulative spring or springs;" they are fixed in or upon such parts " as may be best suited to the form " and fashions" of the various articles. In one drawing, one end of a spring is screwed to a side of a chair frame, while the free end presses against the moveable stump of an arm. In another, one end is screwed to a moveable back, the free end pressing against a hind leg; and in another, a spring has two branches screwed to a moveable back, while the free end is " kept " in position by a resisting rail under the seat."

[Printed, 1*s*. Drawings.]

A.D. 1863, March 6.—N° 639.

RANSOM, Dennis William.—" Improvements in fixing artificial teeth." These are, " when fixing teeth in vulcanite or " like moulded bases, artificial teeth have before been made with " metal pins, which have usually been bent in opposite directions " in order that when the base of vulcanite or other similarly " formed base has been constructed and rendered hard, the teeth " may be held securely to the base. This mode of applying pins " has not however been free from objection;" by these improvements it is proposed to form " the pins, or it may be a single pin, " with a screw thread or threads thereon, or with notches. If " two or more pins are applied to a tooth, they may be arranged " parallel to each other," but it is preferred " that they should " incline away from each other." The heads of the pins are " imbedded in the teeth as in the case with the pins heretofore " used."

[Printed, 6*d*. Drawing.]

A.D. 1863, March 11.—N° 662. (* *)

BROOMAN, Richard Archibald.—(*A communication from Florent Babin.*)—(*Provisional protection only.*)—" Improvements " in voltaic belts and bandages."

"This invention consists in constructing belts and bandages " composed of a bi-metallic core, consisting of plates, strips, or " blades of metal, one electro-positive to the other, such as copper " and zinc, forming a voltaic battery, juxtaposed or placed one " against the other, and covered with same fabric or material " which will keep them in place, and to which buckles, tapes, or

" other means of fastening are applied to secure them to any de-
" sired part of the body. The plates, strips, or blades may be of
" any form according to the part to which they are to be applied.
" The moisture of the body will generally suffice to excite the
" bandages to action. In some cases, however, they may be
" excited by vinegar, or dilute acid more or less strong."

[Printed, 4*d*. No Drawings.]

A.D. 1863, March 11.—N° 667.

WOOD, WILLIAM.—" Improvements in the manufacture and " ornamentation of pomfret or liquorice cakes, rolls, sticks, and " pipes, and other similar articles of confectionary." These are first, making the above articles " colored, and of various colors, " instead of making them black," by repeatedly working and drawing out the boiled liquorice paste or mixture when nearly cold, and altering the ingredients of the mixture. In place of flour using white refined sugar and gum. If desirable to further alter the color adding suitable innoxious coloring matter according to the color required. In preference, using the heated table and rollers described in No. 356, A.D. 1862.

Second. Combining differently coloured liquoric pastes with themselves and with other confectionary so as to form combinations of colors, in straight lines side by side, or by twisting or interlocking, &c.

Third. " Making the figure or device of liquoric cakes of a dif- " ferent color to the body," by forcing paste of the desired color into the sunk figured part of the upper roller of the machine, described in the above named patent, or otherwise.

Fourth. Applying " the above process to the formation of de- " vices, figures, or letters on rolls, sticks, and pipes; or I take a " figured roll, stick, or pipe, say black, and pass it through the " mandril tube of a pipe-making forcing machine " referred to in No. 479, A.D. 1863, which " is supplied with a differently colored " paste, say whitish."

[Printed, 4*d*. No Drawings.]

A.D. 1863, March 18.—N° 732.

MOREL, AUGUSTE.—" Improvements in apparatus for gene- " rating carbonic acid." These, it is said, relate to an apparatus for producing such gas " which is self-supplying and regulates

" itself." Two vessels are placed one above or near the other, the interiors of which are "lined with gutta percha or other " coating, which protects them from the corrosive action of the " acids." "The carbonate as marble, chalk, or bicarbonate of " soda," is placed in the bottom of the lowest vessel. The upper vessel contains the acid, in preference, hydrochloric acid, supplied by an opening at the top which is stopped by a screw stopper. The upper and lower vessels communicate with each other by means of a bent tube passing through the shoulder of the upper vessel and extending nearly to the bottom of the same, the other end passing into the shoulder of the lower vessel. The gas produced in the lower vessel, by means of a pipe from its shoulder, passes into the bottom of a washing vessel and from thence is conducted by a pipe to wherever it is required. A supplementary reservoir of acid is used for putting the apparatus in motion. This consists of a small can-shaped vessel, the bottom of which is placed rather below the top of the lower vessel, close to it, and connected to it by means of a pipe, and by pouring a quantity of acid from it into the lower vessel, carbonic acid "will " immediately form, which expands " in the generator and reservoirs. A safety valve may be placed on the upper chamber, but it is said that "the valve opens badly and does not close sufficiently tight to retain the gas," and to obviate this, a bent pipe extends from the shoulder of the upper chamber into the upper part of a small reservoir nearly filled with water and placed rather above the level of the upper chamber; from nearly the bottom of this chamber extends an upright pipe, on the top of which is a small reservoir. If the pressure of the gas becomes greater than was first intended, the water in the small reservoir first mentioned is forced up the upright tube into the small upper reservoir, and the gas in excess escapes until the pressure returns to its normal condition. Among other applications the gas so produced "may " be applied in baths for the cure of paralysis, gout, and other " affections."

[Printed, 1*s*. Drawings.]

A.D. 1863, March 30.—N° 819.

HUGHES, Hesketh.—" Improvements in machinery for shaping metal and plastic substances." These are, in reference to this subject, a machine suitable for shaping pills, consisting of two rolls, cut or formed with the shape or pattern in a spiral direction, the rolls being driven at the same speed and in the same direction by an arrangement of toothed wheels and a handle. The paste or substance to be shaped is fed in by a hopper at the top, and is pressed between the rolls by a plunger passed down the hopper, "when it is taken hold of by them and delivered " in pills or pieces of spherical or other form according to the " design on the rolls into a receptacle placed below to receive " them."

[Printed, 10*d*. Drawing.]

A.D. 1863, April 6.—N° 868.

HENRY, Michael.—(*A communication from Bernard Saurel.*)—(*Provisional protection only.*)—" Improvements in probes, cath- " eters, and similar surgical instruments." These are, making such instruments "of vulcanized caoutchouc instead of the " materials usually employed;" also in such a manner "that " they may penetrate to the part required without the aid of a " mandril or other rigid instrument, and yet be sufficiently flexi- " ble to pass suitably through the person. For this purpose the " instrument may be made sufficiently flexible in the body, but " terminate in a stiffer and tapering or more slender end at the " entering extremity." A "catheter or instrument may be con- " structed of a piece of vulcanized caoutchouc or like substance, " made tubular or with a passage in it" with thick sides, "com- " paratively to the bore of the passage and terminating at the end " to be introduced into the person in a solid portion which may " be tapering, conical, or thinner towards the extremity." Also the outer end or mouth of such instruments " may be of a conical " or bell-mouth form, and fitted with a vulcanized caoutchouc or " other elastic stopper, attached to the instrument by a cord or " like connection to keep it from being lost. The instrument " may be prevented from entering too far into the person by " attaching to it a sheath or stall, which is fitted on the penis or " other part, and kept there by lacing or otherwise. This sheath " or stall may be a piece of vulcanized india-rubber bent into a " a nearly tubular shape, and having its longitudinal edges " connected by lacings."

[Printed, 4*d*. No Drawings.]

A.D. 1863, May 11.—Nº 1184.

GUIRETTE, JOSEPH SEVERIN.—(*Provisional protection only.*)—“ An improved inhaling apparatus.” This consists of a vessel “ provided with an inlet tube for the admission of air, and the “ mouth of this tube is covered by one, two, or more loose cones “ or thimbles which fit over one another, and in the crown of “ each of which is an aperture.” The aperture in the lowest cone is the largest and so on in each cone, the aperture being smallest in the top cone. “ By these apertures the admission of “ air is graduated according to the requirement of the particular “ case being treated. There is an outlet pipe from the vessel “ which opens into a tube terminating in a mouth-piece, and of “ sufficient length to cause the condensation of any condensible “ vapours before reaching the mouth of the patient.” It is preferred to employ “ loose perforated cones for regulating the “ admission of the air, but other means of regulating may be “ adopted.”

[Printed, 4*d*. No Drawings.]

A.D. 1863, May 18.—Nº 1240.

CHRISTMAS, ELEAZAR. — “ Improvements in carriages for “ common roads.” These are, in reference to this subject, in carriages for invalids, constructing “ a carriage with a recessed “ bottom, side frame, and recess,” by carrying “ the flat ribs and “ angular frames below the flange floor plate,” forming “ a second “ bottom rib under the first, between which upper and lower “ flanged plates, I form a recess for receiving a folding or other “ platform, steps, or the like. The bottom of the recess is also “ boarded with thin boards, the ends of which are supported in “ and fixed to the flanges of the lower rib; the opening or end “ of this recess is closed by a flap at the bottom part of the door “ or otherwise, and when so closed presents the appearance of a “ common ‘rocker.’ In order to keep the platform clear of the “ recess floor, a cross roller is fitted near the mouth of the opening “ upon which the platform rides as it passes out and in of the “ recess.” The seat or seats in the body fold up and are removed and replaced when required. Under the recess is fitted a folding step so that when the platform is in use (and consequently the steps are not required) the moving parts can be disconnected from the door, and the steps remain closed. In the recess is a folding or sliding platform which, when opened, is supported by rods and feet (removeable at pleasure), and forms for an invalid a seat or rest, " as, for instance, in an invalid garden chair, can be " wheeled or moved bodily therewith to and from the interior of " the carriage, through the side doorway, or through a side door-" way of slightly increased dimensions, so that a carriage so " constructed, while peculiarly adapted for the use of an invalid " shall be equally applicable for all the purposes of those in " general use."

[Printed, 1*s*. Drawing.]

A.D. 1863, May 19.—N° 1258.

SALT, Thomas Partridge.—" Improvements in the manu-" facture of trusses." These are, first, " forming the spring in " trusses used for inguinal hernia in two parts, the one sliding " on the other, so that the spring may be extended or contracted " in front, the two parts of the spring being secured together " by binding screws; the sliding end of the spring is curved " upwards and outwards, the exact curve being adopted which " conforms most nearly to the line of the abdomen, and would " bring the pads directly over the inguinal openings; the oppo-" site end of the spring which passes over the spiral column " is provided with two revolving circular pads instead of one, " thus preventing any inclination to tilt or work out of the " horizontal line. The pads are attached to the front of the " truss by a small hook-shaped spring, one limb of which is " connected by binding and adjusting screws to the front part of " the truss, and the other limb secured by a central screw, upon " which the pads rotate."

Second, in manufacturing pads for all descriptions of trusses, forming them " of thin shells or blanks of metal, horn, or other " suitable material, and covering such blanks with material of " any required description, in manner similar to that in which " Florentine buttons are made. The blanks when not formed of " metal may be edged with it to afford the means of securing " the covering; and for the purpose of obtaining a soft surface " or cushion on the face of the pad," placing between the covering and the shell " spongio piline or other suitable stuffing," thus dispensing with all sewing, and obtaining a light and strong pad with an even surface. " In some instances the

" covering and cushioning may be dispensed with if a smooth " surface be all that is required;" or instead of completing them as a Florentine button, if preferred, the shells may be screwed or otherwise secured together; whilst for bathing trusses waterproof material is substituted for the usual covering.

[Printed, 8*d.* Drawings.]

A.D. 1863, May 25.—N° 1309.

BONNEVILLE, Henry Adrien. — (*A communication from Charles William Hine Sargent.*)—" Improvements in the con" struction of carriages." These are said to be "intended more " especially for invalids and other sick or infirm persons," and " for this purpose the carriages or bath chairs are built in two " parts which open by means of hinges, and the seats are " moveable so as to be raised and lowered at will." In a bath chair the two parts are hinged together, the number of hinges being varied at will, the parts open out horizontally and shut upon each other, and are there fixed by buttons or other suitable means. There is a folding step attached to the back part of the chair, and a segment of metal pierced to receive a pin passing through the front part of the chair, which steadies and holds the two parts of the same in place when open, there is "a rack (used " only for three-wheeled carriages)" placed in the upright where the elbows rest, and " which may be raised or lowered in order " to maintain the equilibre of the carriage when open." There " are two iron rods worked with screw threads and turning in " screw nuts, fixed in the centre of each end of the seat," "which " may be raised or lowered by their means." In a brougham the back is divided from the front and the two parts are united at one side by hinges, "the number of which may be varied at " will so that the two parts may be shut together and fixed" much in the same manner as the bath chair described above.

[Printed 10*d.* Drawings.]

A.D. 1863, June 5.—N° 1402.

BROOMAN, Richard Archibald.—(*A communication from Frumence Nicolas Frezon.*)—" Improvements in treating liquorice " root to obtain liquid and solid extracts therefrom." These are, first, the root pulverized is exhausted with cold water, the thick waters are boiled, say for about ten minutes, by which they are clarified and then passed through a woollen strainer, which retains the coagulated matter. The clear liquid, of a dark yellow color, is filtered through animal black, evaporated, "allowed to "cool gradually, when it becomes a pretty firm mass and may "be made into sticks or other forms."

Second. In place of the above process "after the defecation "and filtration of the liquid," as described above, "it is placed "in a wooden or other suitable vessel, and while hot, a solu-"tion of acid" by preference, citric acid is added, "or acid salts "such as bisulphates of potash; abundant coagulation takes "place, and the mass is allowed to cool. I then filter it and "wash the paste in cold water, or I neutralize any slight excess "of acid by bicarbonate of soda, taking care not to employ any "excess of salt." "The product is slightly dried to bring it "into a solid state. It may be used in its solid state, or in the "preparation of drinks, syrups, jellies, candies, or otherwise."

[Printed, *4d.* No Drawings.]

A.D. 1863, June 8.—N° 1422. (* *)

FURLEY, Robert Charles.—"Improvements in the prepara-"tion of castor and other oils for medicinal use." These are said to be thoroughly mixing with castor or other oil, loaf sugar, starch, and tartaric acid in certain proportions. In the Complete Specification it is stated that starch is not employed to mix with "an animal oil, or an oil having a disagreeable, or pungent, or "fishy taste or smell," as the taste is more perceptible when so mixed. And in some cases citric or malic acid is employed in place of tartaric acid; and also, in some cases, finely powdered loaf sugar, lime water, oil of cloves, and oil of cassia are added in certain proportions to the animal oil.

[Printed, *4d.* No Drawings.]

A.D. 1863, June 12.—N° 1464.

SIMS, William.—"A new compound extract to be employed "as a means for the cure of deafness." This is made as follows: —"Dissolve one ounce of honey in one gallon of warm water, to "which add a quarter of a pound of chickweed, a quarter of a "pound of ground ivy, two ounces of rosemary, and a quarter of "a pound of penny royal, together with one ounce of brewers'

" yeast; set this liquor and ingredients to ferment at a temperature of about 66° Fahrenheit for about three days. Put the " fermented liquor and ingredients in the above proportions or " therabouts in the body of a still and apply gentle heat, drawing " over about fifteen gallons out of every twenty gallons contained in the still." "The compound extract thus obtained is " employed for the cure of deafness by dropping four or five " drops into each ear (every night and morning), of any person " afflicted with deafness, temporary or otherwise, until the sense " of hearing is restored."

[Printed, 4*d*. No Drawings.]

A.D. 1863, June 23.—N° 1587.

FEICHTINGER, Franz.—(*Provisional protection only.*)—" Improvements in the manufacture of paper applicable for hemorrhoidal complaints." These are "clean and pure pulp is " combined with" "willow bark, china bark, and gall nuts." " These ingredients are boiled in soft water, the extract is " separated by filtration" or otherwise. "The extract is mixed " with paper makers' pulp, and paper is made therefrom in the " ordinary manner without any size."

[Printed, 4*d*. No Drawings.]

A.D. 1863, June 24.—N° 1593.

SMITH, Samuel. — " Improvements in the manufacture of " liquorice, and in the means or apparatus employed therein." These are, manufacturing liquorice with perforations or indentations therein to facilitate the subsequent separation or division thereof, and the apparatus for effecting the same. "The material " to be perforated or indented is placed so as to be held between " a pair of plates which are perforated to admit of the points or " surfaces for producing the desired perforations or indentations " passing through them. These points or surfaces are applied to " a sliding carrier, guided so that in its motion the points or " other suitable surfaces may pass into or through the material " to be operated upon. The holding plates may be flat, curved, " or of other form adopted to the material to be operated upon."

[Printed, 1*s*. 2*d*. Drawings.]

A.D. 1863, July 8.—N° 1694.

ELY, Frederick.—(*Provisional protection only.*)—" An im-" proved composition applicable to corn plasters." This consists of a mixture of white wax, Venice terpentine, aromatic vinegar, and verdigris, in the proportion of one ounce of white wax to three quarters of an ounce of Venice turpentine, thirty drops of aromatic vinegar, and one quarter of an ounce of verdigris. The said ingredients being boiled together for about two or three minutes, and subsequently placed whilst hot upon the diachylon plaster, in the form of a drop, which when cold and hard is ready for use." The composition may "be employed upon diachylon " plaster, linen, or other thin adhesive surfaces for the cure of " corns."

[Printed, 4*d.* No Drawings.]

A.D. 1863, July 17.—N° 1795.

DARRIEUX, Jean.—(*Provisional protection only.*)—" Pounded " glass powder for cleaning metals and also for tooth powder." This powder is obtained "by sifting the pounded glass which has " been used in the manufacture of glass paper." When used for polishing or cleaning plates of glass, brass, or copper, or other similar articles, it is mixed with refractory or other clay, or emery in various proportions, and used with water. When to be used as a dentifrice for which it will be found very desirable " an " aromatic or other perfume is added, " in proportion suited to " the wants of the customer."

[Printed, 4*d.* No Drawings.]

A.D. 1863, August 7.—N° 1953.

JOHNSON, John Henry.—(*A communication from Henry Giffard.*)—" Improvements in apparatus for preventing sea sick-" ness. These are "the general construction, arrangement, and " combination of apparatus to be applied to sea-going ships and " vessels substantially" as follows, employing "a supporting " platform or cradle suspended by means of springs some distance " above the deck to allow for the vertical movement of the ship, " the springs allowing for the pitching of the ship without " imparting motion to the suspended platform; these suspensory " springs are secured to the masts or to special supports. Other

" springs disposed horizontally or nearly so, and attached to the " sides of the platform and to the masts or other suitable fixed " points, serve to prevent any oscillating motion of the platfrom " during the rolling of the ship. The platform may be either " suspended above the deck line, in which case a flight of steps " and a gangway, also supported by springs, are required to gain " access to the platform, or the floor of the platform may be level " with the deck, a well or cavity being made in the deck beneath " the same to allow of vertical play. These suspended platforms " may be roofed in or left open, and provided with seats, beds, " and other conveniences for voyagers."

[Printed, 8*d*. Drawing.]

A.D. 1863, August 18.—N° 2045.

ARTHUR, JOSEPH.—"An improved apparatus for the preven- " tion, cure, and relief of hernia of every description, together " with prolapsus uteri, uterine hemorrhage, hernia humoralis, " and as a general support for enlargement of the abdomen from " whatever cause proceeding." This consists "of a splint formed " of polled or stop hinges united to one another at different " angles and on different curves, and which is fastened to a " waist belt or strap through a buckle hinge, which forms the " first joint of the instrument. This instrument is also strapped " to the thigh." It affords "the most perfect point of support " for a pad of any description should it be deemed necessary to " use such; but if the instrument is made to fit the abdomen " and groin properly there can be no necessity for any. To the " lower or groin hinge a metal plate is attached on which the " thigh straps are fastened; from the back or side of the thigh " strap another strap extends, which is buckled to the hip or " back." "In scrotal hernia the splint is attached to a curved " piece of iron called a saddle, which passes completely under the " scrotum, and is strapped by crucial straps in front, and at the " back of either thigh to the waist belt. This saddle is also " attached to another piece of metal of a similar shape called the " saddle bed, and which bed is attached to the saddle by means " of two lever hinges which regulate the amount of pressure " necessary on the hernia. The double scrotal splint is formed " on the same principle, but requires only the same number of " saddle straps as the single. In umbilical hernia a cross bar

" is used between both splints, to which, when considerable " pressure is required, a screw pad is attached. In prolapsus " uteri a similar contrivance is used. In uterine hemorrhage a " grasp attached to a screw pad is used, which grasp is formed " either hand-shaped or three-sided. In hernia humoralis the " grasp is rather umbrella-shape, and regulated by a screw to " make pressure from below, in some cases, however, the screw " will not be necessary; to the side of the instrument bands are " attached to regulate the lateral pressure." " In cases of hernia " on one side, a single splint is only required; in hernia on both " sides, two splints. Those splints may be used attached to the " waistband of the drawers or stays, should the patient prefer " this manner of using them to a belt. The manner in which the " correct size and shape of the splints is taken is as follows:—A " piece of flexible zinc is bent to the shape of the abdomen and " groin of the patient, and the hinges are then joined according " to the curves of the model or measure. Though the best " material for the manufacture of splints is steel or any other " hard metal, at the same time they can be made of any softer " metals, or even of wood, cork, horn, leather, or any material " that will offer resistance, and may be used when no great " pressure is required; or they may be formed of india-rubber " tubing or india-rubber air cushions fluted and jointed on the " principle of the splint, and attached to the waist and thigh in " the same manner."

[Printed, 10*d*. Drawing.]

A.D. 1863, August 20.—Nº 2073. (* *)

HAMMOND, Charles Daniel.—" Improvements in apparatus " for the treatment of certain bodily ailments."

" My improved apparatus for the cure of certain bodily ail- " ments consists of a series of pieces of metal or other material " strung on elastic material in the form of a circle, which has at " the lower part of the circle a pad raised so as to cause extra " pressure on a certain portion of the uretha and raphé. This " apparatus I apply for the cure of spermatorrhœa, specially also " for genital weakness and debility, and attach it to an ordinary " suspensory bandage, or it may be otherwise sustained by a belt " or other contrivance. To the belt I attach electric plates at " intervals to induce galvanic action. The apparatus consisting

" of a series of pieces of metal before mentioned may be in " alternate pairs of electric plates; I term it self-adjusting cura- " tive apparatus. It is worn on the penis, which it encircles, and " exerts an elastic pressure thereon, the pad being at the bottom " part and pressing on the raphé as before mentioned, on either " side are two button knobs by which it is attached to a suspensory " belt or bandage worn round the body."

The plates of the apparatus "are arranged in pairs alternately " a zinc with a brass or copper plate, forming a voltaic pole" [pile ?] "of slight power." The length of the elastic cords should be so regulated as to allow "the edges of the plates" "to touch " each other in order to induce the galvanic action." "On the " belt" the inventor applies "galvanic or metallic plates" "in " pairs." Three pairs are shown in the Drawings.

[Printed, 6*d*. Drawing.]

A.D. 1863, August 22.—N° 2088.

MOORE, SIEGMUND.—"Improvements in the means of, and " apparatus for, electro-plating, said apparatus being also applic- " able to medical purposes." These are, "interposing between " the battery and the bath containing the object to be coated, " and the metallic solution, an electro magnetic apparatus or " instrument which will give out both the direct and the to-and- " fro or intermittent galvanic currents as may be desired. The " apparatus is somewhat similar to the ordinary electromagnetic " apparatus." It is proposed to improve the apparatus by the application of a new regulator to "command the power created " by the electric current. Instead of allowing the current to " pass out of the machine by metallic conductors only," conveying "one of the wires from the lower part of the apparatus " upwards into a glass tube containing a small quantity of water " or liquid; the tube is set in a brass socket, to which the wire " is attached, the water resting on the surface of the socket con- " ducts the electricity to a plunger or rod of metal, inserted from " the top of the tube through a metallic cap, from which cap a " final wire conducts the electric current from the apparatus." The depth of the metallic rod in the water or liquid controls the electric power derived from the machine.

[Printed, 6*d*. Drawing.]

A.D. 1863, September 21.—N° 2322.

DOWNES, ANNE ABBEY.—" Improvements in artificial teeth." These are, first, " inserting pins, studs, or bars of metal across " and embedding the ends of the same under the sides of the " groove in every separate mineral tooth, and that whether such " pins, studs, or bars be carried entirely or only partly across such " groove."

Second, " inserting a continuous wire in such groove, and " embedding the loops formed in binding the same across the " groove under the sides thereof."

Third, " inserting in such groove a bar or plate parallel to " the groove, with arms or pins projecting from the sides thereof, the ends of which are embedded under the sides of the groove."

[Printed, 4*d*. No Drawings.]

A.D. 1863, September 26.—N° 2370. (* *)

CLARK, WILLIAM.—(*A communication from Théodore Courant.*) —" An improved fabric for the production of permanent electricity " applicable for wearing apparel."

" This fabric has a warp consisting of carded wool forming the " surface, which is suitably arranged in the reed for completely " enveloping the metal wires in couples forming the weft of the " fabric. The warp thus formed has a thickness of wool on " both sides of the weft for the purpose of imparting softness to " the fabric, and rendering it similar to flannel, without, however, " preventing the electricity produced by the couples from becoming disengaged. The metal weft is composed of a core of " cotton or other fibre containing any suitable number of threads " according to the required diameter of the wires. The cotton " core is first chemically prepared in order to increase its conductibility, and is then enveloped in a laminated covering or " ribbon of zinc or copper, a weft thread of zinc being placed " beside a copper weft in each shed of the warp in order to form " a couple or voltaic element."

The fibres of the above-mentioned fabrics may be " of animal or vegetable " origin either woven or felted, under which latter " head I include paper." The " paper is coated " with an adhesive " composition," on which the metals are fixed in the form of leaves, sheets, or powder, " the metals being of different kinds, " copper and zinc, for example, for producing electricity, after

" which I make up the paper into garments or coverings, to be " applied to the skin, and caused to adhere thereto if desired."

[Printed, 4*d*. No Drawings.]

A.D. 1863, October 6.—N° 2445.

BATCHELOUR, William.—(*Provisional protection only.*)— " An improved apparatus for moulding and modelling palates, " teeth, and gums for dental purposes." This consists of a tray or holder, whereby gutta percha, wax, &c. may be inserted into the mouth of a patient in order to receive by pressure thereon the form or impression of the teeth and gums. The tray is made so as to be adjustable to different dimensions of jaws or mouths, by " forming the tray and its handle in two divisions or halves," the handle opening and closing like nippers or pliers which have springs to open them; but it is not controlled by springs, the handles being opened or closed and set in position bp the operator. " The inner side or flange of the tray to which the handles are " attached works on a central hinge, but the outer sides or flanges " of the tray mould are so formed that one flange shall overlap " the other, and admit of the opening or closing of the tray, and " the maintenance of the curvilinear exterior form of the mould. " That portion of the tray which has an extension of its curvilinear flange or side must also be formed with an extension of " its base, which travels through a slot formed by a slip of metal " rivetted and soldered from the opposite handle in the centre or " hinge of the tray. So also to control or guide the extended " flange a projection or fixed or set screw is fixed on its outer " edge, running in a channel or curvilinear opening in the other " flange." The tray as described " is suitable for taking moulds " or impressions of the teeth and gums, but in order to render it " adaptable for including the mould of the palate, the inner " flanges of the tray must be bent over, so as to form a plate or " roof, and that flange of the tray which is extended beyond the " central point must likewise have its roof or plate extended " beyond the central line or division of the opposite plate." In order to fix the tray in the required position it is proposed " to " adjust in one side of the handle a quadrant or segment having " a male screw cut thereon; this screw passes through and beyond " the opposite half of the handle, and a milled-edged female

" thumb-screw is placed on the quadrant, whereby the opening " of the handles may be accurately regulated and controlled."

[Printed, 4*d*. No Drawings.]

A.D. 1863, October 9.—Nº 2473.

LEFEBVRE, Louisa.—" Improvements in vapor-bath appa- " ratus." These are in a " lampholder, generator, and chamber, " the vapor-bath for local application, and the chair vapor-bath," is as follows :—The boiler or steam generator is an oblong round vessel with two safety valves on the top, at one end is a funnel " for the introduction of water, with or without volatile substances " into the generator through a double cock with a globe between ; at one end is a manhole, at the other end near the bottom is an opening for emptying the generator; at the same end is a water level. On the top of the boiler at the other end is a cock, through which steam passes into a flexible covered tube to a vaulted chamber or bath in which the patient is laid, the face being uncovered. There are two " pockets or covered holes " in the side of the vaulted covering, " by which the body of the patient may be reached, " either for the purpose of being rubbed or dried." The furnace or a lamp or burner occupies a trough below the boiler. The frame of the chamber in which the patient lies is composed of metallic tubes covered with cloth. The steam from the generator enters a globe at the top of the chamber, into which also may be " introduced medicated substance through the funnel " at top. " The steam circulates through the tubes and escapes into the " chamber through holes in the upper surface of the lower tubes." The apparatus for local applications is somewhat like the rose of a watering can, but the front of the apparatus is oblique to the tube supplying it with vapour through a tube with a stopcock, so that while the steam issues through the small holes in front above, the water condensed runs into a gutter below. In the vapour-bath chair the steam from a generator enters a pipe through a cock at the arm of the chair, passes by a pipe into a condensing globe below, in the lower part of which is a small conical pipe from which the water escapes, and the steam passes upwards through a pierced diaphragm into a chamber, " over " part of which the patient sits."

[Printed, 10*d*. Drawing.]

A.D. 1863, October 16.—N° 2536. (* *)

JAY, SAMUEL.—" Improvements in the manufacture of stockings " and drawers."

This invention consists " in the insertion into cotton or silk " stockings and drawers of a portion of woollen fabric, the " object being to cause such layer or insertion to cover any por- " tion of the leg, thigh, hip, or back of the wearer, and act as a " protection against rheumatism or other similar affections and " the effects of cold weather."

The invention may be carried into effect by weaving a woollen fabric " in any desired portion of a silk or cotton stocking or " drawers (excepting the toe part), such fabric to be of any " required dimensions in width or length, or even completely " encircling any portion of the garment. This can easily be " accomplished by the substitution or addition of the requisite " woollen warp and weft, or other woollen filament, during the " process of manufacture in the loom. The woollen fabric may " be knitted in the garment if desired, or it may be cut out from " a piece and inserted by any well-known means of effecting such " work. By these improvements the advantage of woollen " clothing may be obtained for any particular portion of the " body covered by the above description of garments without " the necessity of wearing garments entirely composed of wool."

[Printed, 4*d*. No Drawings.]

A.D. 1863, October 28.—N° 2662. (* *)

CORONEL, ABRAHAM SENIOR.—(*Provisional protection only.*)— " An improved preparation of tobacco for fumigating purposes." This preparation " is intended principally to be used for the " purpose of fumigating plants in greenhouses and other " places," without in any way injuring the plants, and " without " leaving any nauseous or disagreeable odour;" it may also be employed for fumigating rooms. Leaf tobacco, divested of stalks, is to be well shaken in a sieve to extract " all the sand and " saltpetre and other impurities." " A small quantity of pure " powdered cascarilla bark " is then to be mixed with it, and a " very small portion of the essence of valerian root " is to be sprinkled over it. The tobacco thus prepared may then be packed up, " and is ready for use either by means of the ordinary fumi-

" gating apparatus or otherwise." The valerian root " attracts " all the insects and ensures their destruction."

[Printed, 4*d*. No Drawings.]

A.D. 1863, November 6.—N° 2757.

GUIRETTE, JOSEPH SEVERIN.—(*Provisional protection not allowed.*)—" An improved inhaling apparatus." This consists of a " vessel provided with an inlet tube for the admission of air, and " the mouth of this tube is covered by one, two, or more loose " cones or thimbles, which fit over one another, and in the crown " of each of which is an aperture. The aperture in the lowest " cone is the largest, and in that next above it is smaller, and " so on, the aperture being smallest in the top cone. By these " apertures the admission of air is graduated according to the " requirement of the particular case being treated. There is also " an outlet pipe from the vessel, which opens into a tube terminating in a mouthpiece, and of sufficient length to cause the " condensation of any condensible vapours before reaching the " mouth of the patient."

It is preferred to employ " loose perforated cones for regulating " the admission of the air, but other means of regulating may be " adopted."

[Printed, 4*d*. No Drawings.]

A.D. 1863, November 16.—N° 2866.

THONGER, GILBERT.—" Improved modes of preventing accidents arising from the sale or use of poisons." These are, " attaching to bottles or other receptacles for containing poisons " labels sanded or roughened in any other suitable manner upon " the surface; this may be done by attaching sand paper or glass " paper labels, or by using embossed or raised labels, or by " sanding or roughening a portion or the whole of the bottle " or jar or other receptacle, after having previously applied an " adhesive solution to which the sand or roughening material " will adhere." " If embossed or raised labels or letters be " employed, they must be made perfectly solid, or be filled in at " the back with some firm and unresisting compound that will " prevent their contracting or returning to a level; the use of " the ordinary embossed or raised label or letters forms, therefore, " no part of my improvements."

[Printed, 4*d*. No Drawings.]

A.D. 1863, November 23.—N° 2947.

CARR, THOMAS.—" Improvements in machinery for amalgamat-" ing or intermixing dry, semi-fluid, or aqueous materials, and " for agitating solids with liquids for combining, dissolving, or " washing the same." These improvements in machinery, it is said, are applicable to many purposes which are named, among which are " chemically combining or dissolving chemicals and " drugs," and are as follows :—First, " the use of a series of " blades set at angles to their line of motion, when two separate " sets of such blades are worked in combination, and rotate " round a common centre at varying speeds in the same or " opposite directions."

Second, arranging pans, &c., so that they can easily discharge the material operated upon, " by mounting it on trunnions, by " allowing one edge to descend, the other being carried upon an " axis or upon trunnions, by lowering it, or by raising the " agitators, so as to get the pan from underneath the agitators. " The pan may be arranged on a carriage, so that it may be " tipped at any place.

Third, supplying heat (steam, hot air, or water) by pipes of lead, &c. coiled in the bottom of the pan; or the bottom of the pan is hollow, and supplied with heating fluid.

Fourth, gradually distributing acid, &c. over the materials operated upon as above by means of pipes passing along the arms carrying the agitators, or some such means.

Fifth, arranging and using " a centrifugal or exhausting fan " for removing noxious fumes, given off by material operated " upon by mechanical agitators."

Sixth, the arrangement and combination of pans or vats upon trunnions of the agitating mechanism, and of the means of distributing the acid.

Seventh, " the combination of one set of moving agitators with " bars or blades fixed in the bottom of the pan or vat."

[Printed, 2*s*. 6*d*. Drawings.]

A.D. 1863, December 10.—N° 3114. (* *)

POLS, JOHN ANTHONY, and BERNARD, PETER OWEN.—(*Provisional protection only.*) — " Improvements in obtaining

" purified or refined oils, and in obtaining oil cakes from cotton " seed and other vegetable substances, also in refining or purify- " ing cod liver oil." These are, subjecting the oil " to a solution " of salts of tartar, chloride of lime, and white vinegar, after- " wards filtering it through salt."

Cod liver oil is treated with the above solution, by which it is made "perfectly free from taste and smell."

For castor oil the seed is crushed as above, and a small quantity of oil of bitter almond added, and the oil passed through the filter.

[Printed, 4*d*. No Drawings.]

1864.

A.D. 1864, January 15.—N° 112. (* *)

HENERY, Alfred Field.—" An improved galvanic belt."

The "galvanic belt" is applied " to the human body for the " treatment of various nervous affections, debility, rheumatism, " and other disorders to which electricity is ordinarily applied."

The belt has a leathern portion and a continuation of silk, which is fastened by a buckle and carries the discs (of copper and zinc respectively) that form the poles of the arrangement. A piece of India-rubber or elastic webbing is let into the silken portion of the belt " to afford ease to the wearer." To the leathern portion of the belt "are attached by eyelets the series " of thin plates of copper and zinc, or other metals capable of " forming a voltaic pile or series, between each pair of plates a " layer of leather, felt, cloth, or other suitable soft material is to " intervene."

The terminations of the voltaic series are connected to the above-mentioned discs by means of "fine wire spiral springs."

Below that part of the belt which carries the elastic webbing a " suspensary bag " may be attached, in which " a series of small " metallic plates may be arranged, connected with the two discs " by conducting wires."

When the belt is only used temporarily, the absorbent material between the plates should be moistened.

In this apparatus "electricity is applied to the human body "by contact with the discs," thus "forming a self restorer and "regenerator."

[Printed, 8*d*. Drawing.]

A.D. 1864, February 8.—N° 330.

BROWN, Alfred Gardiner. — (*Provisional protection not allowed.*)—"Registering the quantity of air expired from the lungs "during respiration, forced or natural." This consists in adapting "a revolving drum similar to the wet meter drum now in use "for gas meters with the necessary containing case, wheel-works, "and dial, levelling, entrance, exit, and water supply apertures. "The dial registers in cubic inches all the air passing through the "instrument by means of two hands, viz., a large hand extending "from the centre to the circumference of the dial registers in one "revolution one hundred cubic inches of air, a smaller hand "revolving from an excentric point on the dial and registering "one thousand cubic inches in a complete revolution."

[Printed, 4*d*. No Drawings.]

A.D. 1864, February 9.—N° 340.

CLARK, William. — (*A communication from Charles Pierre Bailleinont.*)—(*Provisional protection only.*)—"Improvements in "apparatus for inhaling air when charged with vapours." These are, in place of glass, having a vessel of metal of a "cylindro-"conical" shape in which are placed "medicinal or pharmaceu-"tical liquids" through which the air passes by means of a funnel-mouthed tube reaching nearly to the bottom of the vessel. The tube through which the patient inhales is attached to the top of the vessel, and it has an india-rubber or other plastic mouthpiece. This vessel may be heated or is capable of receiving hot liquids without breaking.

[Printed, 6*d*. Drawing.]

A.D. 1864, February 17.—N° 406.

MOORE, Edward.—"Improvements in the manufacture of "surgical bandages." These are, "the manufacture and construc-"tion of surgical bandages of materials having made or formed "therein perforations or holes," made by any contrivance suitable for the purpose or "formed in the process of weaving or manu-" facturing the materials employed," so as to "admit of the most " perfect evaporation."

[Printed, 4*d*. No Drawings.]

A.D. 1864, February 17.—N° 408.

NEWMANE, Henri.—"A new medicinal compound pill for " diseases of the liver." This "consists in the root of the plants " sanguinaria and podophyllum dried, so that they may be ground " and reduced to a powder," taking "about equal quantities of " each of these, and a sufficient quantity of extract of taraxaci " to form the whole into a suitable mass," from which pills are formed, "apportioning the size or dose according to the age or " habit of the patient." The proportions supposed to be most efficient are 3 ounces of "podophyllum," 3 ounces of "sangui-" naria," 5 ounces "extract taraxici." "Notwithstanding this " last ingredient may be omitted and any other suitable ingredient " substituted for combining the other two ingredients."

[Printed, 4*d*. No Drawings.]

A.D. 1864, February 29.—N° 500. (* *)

GEDGE, William Edward.—(*A communication from Paul Geofrey-Gomez.*) — (*Provisional protection only.*)—"A hygienic " and inodorous apparatus, applicable to the cradles or cots of " children, and to the beds of adult invalids." At one side of the cot or bed is a drawer. The bedding is composed of a spring mattress, a woollen one, and a linen sheet, all provided with an " opening over the drawer. Around the opening is placed "a " cushion of round and convex form, made of caoutchouc or " gutta percha, and having a tube of the same material" for inflating it. A funnel shaped basin, with a valve at its lower end, descends into the drawer. In a cot a caoutchouc or gutta percha band is glued on at about two inches from the circumference of the cushion; this band is buttoned round the child's "thighs " and buttocks."

[Printed, 4*d*. No Drawings.]

A.D. 1864, March 1.—N° 504.

CHAPMAN, John.—"Spine bags to be employed in controlling " the circulation of the blood by the combined or independent

" application of ice or iced water and warm water or other fluid " to the region of the spinal cord." These are first, " forming " spine bags divided into several cells or compartments by the " external application of suitable clamps." Second, " the appli- " cation of clamps (which, when closed, exercise a lateral pressure " on the bag so that when it is full they detract little from its " oval shape), to dividing the bag into equally or unequally sized " and hermetically sealed cells or compartments, and to hermeti- " cally closing the mouth of the bag." Third, " the formation " of spine bags composed of india-rubber or any other flexible " waterproof, and otherwise suitable material divided into per- " manently independent cells or compartments by one or more " fixed vertical divisions or septa, and having their mouths her- " metically closed by the external pressure of suitable clamps." Fourth, " the formation of spine bags consisting of two or more " upright tubular cells or compartments."

[Printed, 4*d*. No Drawings.]

A.D. 1864, March 16.—N° 668.

CARRICK, JAMES.—" Improvements in apparatus for inhaling, " breathing, and respiratory purposes." These are first, the combination of parts " so that the air inhaled shall enter by one " free aperture or apertures, and after passing through the lungs " to be respired from a second distinct aperture or apertures."

Second, " the introduction of a purifying medicine, moist or dry, " into the inhaling aperture or chamber."

Third, " the introduction or combination with the mouth " respirator of a portable apparatus to contain medicated or other " substances."

Fourth, regulating " the temperature of the air to be inhaled."

The inhaling apparatus consists of a chamber having two orifices; shaped to fit the mouth, permitting the ingress and egress of the air as above, on the egress aperture is a delicate self-acting valve which permits the free exit of the respired air and prevents any return of the external atmosphere. " The medicating cham- " ber, which may be used at the same time to regulate the tempe- " rature of the inhaled air consists of a portable vessel" with tubes for egress and ingress of air; it may be shaped to be worn underneath the garments; it may have one or more chambers to hold liquid or other matters " to medicate or purify the inhaled

" air. This vessel may be either cooled or heated by artificial " means other than the natural temperature of the body."

[Printed, 4*d*. No Drawings.]

A.D. 1864, April 18.—Nº 974.

DAVIES, George.—(*A communication from Albert Galibert.*)— " An improved respiratory apparatus." This apparatus among a number of uses which are named is applicable "for taking " ordinary or medicinal baths;" and " vapour baths also will be " rendered more efficacious," "because the patient being able " to breathe the external atmosphere the body can support a " much higher temperature."

"The apparatus is composed, firstly, of a small piece of wood " or ivory having the form and dimensions of the human mouth " when open, and pierced with two holes. Secondly, of two " india-rubber tubes, which are affixed to this mouth-piece, so " that each tube corresponds with one of the holes; the other " end of the tubes communicates with the pure atmospheric air. " The length of these tubes is determined by the conditions under " which the apparatus is to be used. Thirdly, of a nose-clip, " intended to prevent the introduction of any liquid or gases into " the nasal passages." "The manner of using this apparatus is " as follows:—The operator applies the clip to his nose and " inserts the mouthpiece into his mouth, holding it lightly with " the teeth, he then closes one of the openings with his tongue " and commences to draw breath through the other, prolonging " the inspiration as long as possible. He then carries the tongue " to the latter and breathes out or exhales through the former, " and so on alternately."

[Printed, 8*d*. Drawing.]

A.D. 1864, April 21.—Nº 1007.

JENNINGS, Josiah George, and LAVATER, Manuel Leopold Jonas.—"Improvements in pumps, and in the con- " struction of flexible pipes or hose, and in the apparatus em- " ployed therefor." These are, in reference to this subject, in pumps for drawing milk from women, using an elastic or india-rubber bottle, the neck of which has "a glass or other cup for " fitting to the nipple, and there is a reservoir connected with " this cup to receive the milk drawn off. Between the cup and

" the india-rubber bottle is a valve consisting conveniently of a " disc of india-rubber with slits or punctures in it, which will, " when there is a vacuum within the bottle, open to let air pass " into it, but will close air-tight when the pressure is in the con- " trary direction. In the india-rubber bottle similar slits or " punctures are made." "When the bottle is collapsed and then " expanded, a vacuum is formed within it, which can only be " supplied by air from the cup-like vessel covering the nipple, " and a vacuum being formed therein the milk is caused to flow." " A similar arrangement is suitable for use as an enema pump, " the cup-shape vessel being dispensed with, and a suction pipe " substituted for it, whilst a second pipe forming the outlet of " the pump is applied to receive and convey the liquid passing " out of the outlet slits or holes formed in the india-rubber bottle, " or more conveniently, these holes are not made in the bottle " itself, but in a cap of india-rubber fitted with a second neck " formed in the bottle."

[Printed, 1*s*. 8*d*. Drawings.]

A.D. 1864, April 22.—N° 1012.

DAVIES, GEORGE.—(*A communication from Emile Siegle.*)— " Improvements in inhaling apparatus." These are employing " heated vapours instead of compressed air," as follows:—In a metallic casing is " a spirit lamp above which is placed a bottle " or glass vessel containing water. In the stopper of this vessel " is placed a bent pipe (also of glass), the mouth of which is in " a horizontal position outside the casing. Immediately below " this orifice is a second glass tube placed at right angles thereto " in a vertical position, and these tubes are connected together " at a short distance from their orifices by an elbow pipe. The " lower end of this vertical tube dips into the medicated or other " liquid to be reduced to spray, which is placed in an open vessel " beneath it; a small spirit lamp is placed below the vessel to " heat the liquid if required. Upon igniting the spirit lamp " inside the casing, the water in the glass vessel will be converted " into steam, which passing along the bent tube will be blown " from the orifice thereof immediately over the mouth of the " vertical tube at right angles thereto, which will have the effect " of sucking (as it were) the liquid up the tube, and blowing it " off the top of the same in the state of spray or powder. A small

" thermometer is placed in the stopper of the glass vessel wherei
" the steam is generated, and the heat is regulated by raising or
" lowering the spirit lamp."

[Printed, 8*d*. Drawing.]

A.D. 1864, April 22.—Nº 1017.

HARRINGTON, George Fellows.—" Improvements in ma-
" chinery or apparatus for drilling, cutting, grinding, and polish-
" ing teeth whilst in the mouth." These are "the substitution
" of any suitable arrangement of spring clockwork for the archi-
" medean screw or bow or other contrivance hitherto employed
" for giving a rotatory motion to tools intended to operate upon
" teeth whilst in the mouth." The clockwork "is contained
" within a hollow metal box, case, or holder of a convenient size
" to be held in the hand of the operator." " When the spring
" is wound up the clockwork immediately commences to revolve,
" and thus imparts rapid rotatory motion to the tool." "The
" revolutions of the tools are arrested or controlled by the pressure
" of the thumb or finger, or of a break lever against a break
" wheel, which is fitted on to the arbour or spindle of one of
" the train of wheels forming the clockwork."

[Printed, 10*d*. Drawing.]

A.D. 1864, April 29.—Nº 1073.

MENNONS, Marc Antoine François. — (*A communication from Jules Viel.*)—" An improved apparatus for the capsulation
" of fluid medicines." This consists as follows:—The plastic matter to be formed into capsules is first passed into a hopper in the bottom of which is a slit through which the plastic matter flows (when hot) into a long narrow trough, and is thus formed into strips or bands. The bands of plastic material thus formed are then taken to the capsuling machine where they are wound on to two bobbins or reels, the ends of the bands hanging down as low as the "closing apparatus," which is composed of two parts forming half tubes or jaws, one of which is moveable by means of a screw and fly wheel, the other stationary and fixed to the framework. This closing apparatus is set above two mould plates, one of which is moved backwards and forwards by a screw and fly wheel in a similar manner to the closing apparatus, the corresponding mould plate being fixed to the framework. Upon

this framework is fitted a small steam boiler with its necessary appendages for heating the apparatus.

In order to make the capsules the plastic material is unwound from the bobbins a certain distance by means of a lever which brings it between the two half tubes or jaws, which jaws are then brought together by the fly wheel and screw, and forms the plastic matter into a species of tube. The closing apparatus is then re-opened to permit more of the plastic material to be brought from off the rollers, and to bring the material down in between the mould plates, which are immediately closed by the screw and fly wheel and thus form a bottom to the tube. This operation is repeated four times, the lever being carried up at each shut-off motion of the closing apparatus. The fly wheel is then set in action to carry the free mould plate to its stationary counterpart, the plastic material being pressed, its lower extremity is closed to form a species of bag. The fly wheel being reversed the tube comes still further down, when a cock (fitted to a small reservoir placed at the top of the machine from which a pipe descends almost to the mould plates) is opened and admits to the bag the required quantity of fluid medicine. The same fly wheel is then again turned forwards to bring the mould plates together, when a quantity of capsules being filled, closed, and detached, are dropped into a drawer ready for use.

[Printed, 8*d*. Drawings.]

A.D. 1864, May 7.—N° 1161.

NEWTON, ALFRED VINCENT. — (*A communication from John Jones.*—" Improved apparatus for facilitating the inhalation of " medicinal substances." These are, " the construction and use " of the box for containing medicated powders for respiration " and fitted with a revolving fan for mixing them with the air to " be breathed " as follows :—The box has a lid formed with two inclines : " in one of these an opening is made to permit of the " insertion of the nose and mouth of the patient, and in the lid " a wire screen is fitted. Within the case is fitted a removeable " box with a segmental bottom, and in this box is mounted a fan " with radial wings formed of feathers, bristles, or other suitable " material. The axle of this fan projects through the case, and " to it is keyed a winch handle for imparting rotatory motion to " the fan ; holes are made in the case and box to allow of the "free admission of air to the interior." The medicinal matter as a dry fine powder is placed in the box and the lid shut down, the patient places his face over the opening and rotates the fan which keeps the powder in suspension in the air, so that the patient inhaling it "may receive the powder into the lungs."

[Printed, 8*d*. Drawing.]

A.D. 1864, May 18.—Nº 1254.

MERRIKIN, John Bilby.—"Improvements in bottles or vessels "for containing poisons." These are forming such "by casting "or moulding the same with protuberances, excresences, or pro-"jecting portions," but not so marked as to "be productive of "serious injury to the hands." "For furthering the prevention "of accidents, I can have embossed on or indented in front of "the bottle or vessel the word 'poison,' or a letter or symbol "denoting 'poison,' and this should be placed beneath the "'label.'" "Although the general contour of the bottle or "vessel may be the ordinary cylindrical form, or any other deemed "convenient, yet I claim a decided advantage from the adoption "of the pentagonal form."

[Printed, 6*d*. Drawing.]

A.D. 1864, May 31.—Nº 1343.

ROCHETTE, Florestan, junior.—(*Provisional protection only.*) —"New and improved hygienic drawers for females." These resemble men's bathing drawers but are looser, giving entire freedom to the abdomen and loins, one side is slit the entire length, "so that when required one of the thighs may be entirely "uncovered, which will permit the wearer to urine without taking "off the drawers, strings or a band fasten the drawers round the "waist, and lastly between the thighs is a pocket, so made that "a sponge, intended to receive the menstrual discharges, is held "separated from the lips by a space of about two inches, in order "to avoid all inflammatory friction. The sponge is placed in an "oval pocket made of caoutchouc, which pocket is then placed "in that first mentioned, and fastened thereto by buttons or "otherwise, so that it may be removed at pleasure. It must "retain its position in front of the vagina, whether the female "wearing the drawers be seated, standing, or reclining."

[Printed, 4*d*. No Drawings.]

A.D. 1864, May 31.—N° 1346.

DAVIES, George.—(*A communication from John Terrel and Joseph Stulb.*)—" Improvements in artificial teeth and in moulds " for forming the same." These are, first, in forming artificial teeth, each block of teeth has a longitudinal opening from end to end, and " in the base of the block are two oblong depressions or " openings communicating with the longitudinal opening," so that vulcanizable gum passing into and filling these depressions or openings on hardening " will secure the blocks firmly to each " other, and to the base," which " are placed in juxtaposition." " Single teeth may also be formed in a similar manner." " Projections on the ends of the blocks or teeth may be so fitted to " each other that the gum can pass through the longitudinal " opening in one block or tooth to that in the other without " being in the least exposed, the natural appearance of the teeth " being thus maintained."

Second. In constructing moulds, " having fixed projections for " forming the depressions or openings in the base of the blocks, " and moveable strips having suitable recesses for forming the " crowns of the teeth, which strips are kept in their relative " places by means of a key. The longitudinal openings are formed " by means of a pin, which is passed through the mould, in contact with the fixed projections above named. When the teeth " have been moulded and baked, the pins are withdrawn, and " the key is also removed; the moveable strips can then be " drawn backward, and the teeth can be taken from the mould," with openings, depressions, &c., as above described.

[Printed, 8*d*. Drawing.]

A.D. 1864, June 6.—N° 1406.

LOYSEL, Edward. — (*Provisional protection only.*) — " Improved apparatus for obtaining extracts from tea, coffee, and " other vegetable substances." The apparatus is divided into " two vessels connected together by an air-tight joint. The " upper vessel receives the substance to be operated upon, placed " upon a perforated false bottom, and it is then filled with " boiling water." Beneath the false bottom is a chamber provided with a double action stop-cock, and from the chamber rises a vertical pipe, the lower end of which communicates with one of the passages of the stop-cock, while the other end is open."

" The other opening of the stop-cock forms a commununination " between the chamber beneath the false bottom of the upper " vessel and the capacity of the lower vessel, which is the recipient for the vegetable extract when it passes through the " filtering medium." In the lower vessel is a little water, and beneath it is a spirit lamp, and steam generated expels the air from it up the vertical pipe connected with the atmosphere. While this is going on the infusion is proceeding, and an extract is produced. On all the air being expelled from the lower vessel, and it being filled with steam, the stopcock into the pipe is closed, and the lamp removed, condensation of the steam takes place and a vacuum is formed, and "the pressure of the air on the surface " of the infusion or extract in the upper vessel will force the " liquid through into the chamber below the false bottom, and " from thence through the second aperture in the stop-cock into " the lower vessel." Among other purposes which are named " the principle of this invention," it is said, may be applied "for " obtaining infusions, decoctions, or extracts from drugs."

[Printed, 4*d*. No Drawings.]

A.D. 1864, June 23.—N° 1571. (* *)

TIRAT, Joseph.—(*Provisional protection only.*)—" A new voltaic apparatus for the relief of hernia in all its forms and " stages."

" The apparatus is composed of two voltaic piles composed of " discs placed one above the other when a voltaic current is kept " up by means of alkaline salts introduced by means of a tube " into the piles. The zinc discs are moveable, and are so inserted " into the copper discs that the voltaic current can be increased " or diminished at pleasure by means of multiplicating wires. " The entire apparatus is enclosed in a morocco belt or pocket " lined with flannel. The belt or pocket has in internal and external surface; the internal is intended to be placed horizontally " or otherwise upon the surface of the body by means of the rupture bandage. It gives room for the two copper wires which " unite the positive and negative poles of the piles within the " belt or pocket. The two other extremities of these wires are " attached to two copper buttons placed in the interior of the " cushion of the rupture bandage, and by this means it conveys " the voltaic current developed by the piles.

"The same apparatus containing the piles and the same "mechanism may be used as a waistband, corset, bracelet, knee "cap, and may be applied to any part of the body, and a continuous voltaic current can be communicated to the internal "surface of the apparatus by means of two copper buttons or "strips of copper, which serve as conductors, conveying the "current to that part of the body upon which the apparatus is "placed. The apparatus varies in size, and according to its "intended application and the intensity of the voltaic current it "may be desired to be obtained."

[Printed, 4*d*. No Drawings.]

A.D. 1864, June 24.—Nº 1586. (* *)

GEDGE, WILLIAM EDWARD.—(*A communication from Jean Louis Margoton.*—(*Provisional protection only.*)—"An improved "bedstead." The frame is of wood, composed of two side pieces and two end pieces about nine inches high. Towards the middle "of the fore part of the frame and on its inner face" are "two "lintels forming a slide or groove, and serving to support fourteen cross pieces or laths." The laths are joined two and two together; the springs, "which are five in number to each row," are screwed to them "by their centre" at about eight inches apart. By this arrangement a double spring frame is obtained which may be turned at pleasure, one on each side of the laths. The springs are retained in their repective position by "a succession of squares "like a draught board;" these are attached to flat or cylindrical bands which pass through ring bolts on the sides. The patentee describes the length of his bedstead and the length and thickness of the several parts of the frame, and says that it will be useful to sick persons, "there being no paillasse or stuffed mattrass to "be removed, as air may circulate freely through it."

[Printed, 4*d*. No Drawings.]

A.D. 1864, June 27.—Nº 1604. (* *)

ASKEW, JOHN.—(*Letters Patent void for want of final Specification.*)—"Improvements in the construction of go-carriages for "teaching children to walk, and giving assistance to invalids, and "for other domestic purposes." This carriage is "manufactured "in iron, brass, steel, and other metal;" the lower rim carries "three or more upright telescopic tubes," the bottom of each being

" supplied with a spiral spring to give elasticity to the upward " part of the carriage." The tubes " have adjustable set screws to " regulate the height of the upper rim " and " joints at the top " and bottom." The upper rim is constructed with a door and " provided with a safety lock and suspension belt." The carriage moves on castors made of brass or other metal with india-rubber rollers; it is " to be constructed with joints and set screws so that " it can be taken to pieces."

[Printed, 4*d*. No Drawings.]

A.D. 1864, July 8.—N° 1698.

RUSSELL, GODFREY.—" Improvements in the construction of " apparatus for carrying or supporting stretchers and other articles or weights from the shoulders of bearers, and in straps to " be used in combination therewith for attaching or securing " bodies to stretchers." These are, first, " forming or adapting " to the shoulder of a bearer a somewhat broad strap or band," in preference, of leather, " wider at or about its centre than at " either end, and is curved or shaped so as to fit and adjust itself " to the shoulder of the wearer; it is united to another and " similar strap for the other shoulder by a small connecting " piece," which passes round the back part of the neck. " Straps are connected to the shoulder pieces, or they may be " formed in a piece therewith, and depend therefrom, carrying a " ring at the bottom for the reception of the stretcher arm, when " used for carrying stretchers the length of the straps being " regulated by a buckle."

Second, " attaching to straps for securing bodies to stretchers " " additional or supplementary straps for passing round the legs " of the body." These straps are stitched to the strap proper. " The arms are placed across the chest, and are secured by the " additional straps, as described for the legs. The fastenings for " the additional straps may consist of buckles, clips, toggles or, " any known appliance or appliances for connecting two ends of " a strap together."

[Printed, 8*d*. Drawing.]

A.D. 1864, July 16.—N° 1784.

BONNET, AMELIE ANGELINA.—(*Partly a communication from Leon Bonnet.*)—" Certain improvements in the mode of preparing

" and applying chemical fumigations to the treatment of human " diseases, and in apparatus connected therewith." These are said to be first, " the special arrangements in the construction of " apparatus."

Second, "the employment of the vacuum obtained by a " sucking pump or otherwise to increase the action of the created " gases."

Third, "the construction of an independent stove serving to " introduce heated air in the chambers where the human body or " limbs of the human body receive the fumigations."

The apparatus consists of a chamber of a suitable form capable of being closed as nearly tight as possible, " so constructed as to " enable the patient to be seated with his head outside the top of " the chamber." At the bottom of this chamber is a small perforated compartment containing a heating apparatus, on which is a pan containing the chemical agents to be formed into gas or vapour, which pass " through the perforations in the compartment " into the chamber or bath." " A thermometer is also used to " register the temperature of the gases." A small sucking pump is employed " to produce the vacuum in the apparatus when " required." " An apparatus of the same kind, but prepared " only for the introduction of the arms or legs," is described and it is stated "that several variations in the construction of the " apparatus can be effected without deviating from the principle " of my invention."

[Printed, 10*d*. Drawing.]

A.D. 1864, July 25.—N° 1849.

JEFFREYS, Julius.—" Improvements in climatic apparatus." These are first, " an apparatus acting on the principles of the " respirator, and consisting of a metallic case which guides the " breath currents not horizontally as in that instrument, but vertically and alternately downwards and upwards through coils of " fine wire separated or not, by intervening and parallel plates of " metal. By this arrangement an effect is obtained corresponding " with the gradative condition of a true respirator." This apparatus is placed in cloth and tied round the face, or " it is formed " into an instrument to be held in the hand and applied to the " mouth or to the mouth and nostrils."

Second, in respirators, dispensing "with the metal lattices "which carried the several layers of the wirework by forming "these layers of bruised wire, which when coiled into flat "skeins or coils, forms self-supporting and straight and parallel "lines of wires; these lines are then held in their position at "minute distances apart by transverse bands of flattened wire "lying on the inside of each skein accross the top, middle, and "bottom of it, these bands are soldered to every upright wire of "the skein, there being separate bands for each of the layers of "wire which form the two sides of the skein; several of such "skeins kept distinct from each other by slow conducting cords "of silk constitute together the operative portion of a respirator."

[Printed, 6*d*. Drawing.]

A.D. 1864, August 2.—N° 1916.

DELF, FREDERICK DANIEL.—(*Provisional protection only.*)—"An improved apparatus for coating fabrics or materials with "medical or other compounds, also applicable for ironing pur"poses." "The apparatus consists of a small metal or other "chamber containing water, which is heated by means of a jet "of gas or other flame to 212° Fahrenheit, to this chamber a "curved pipe is attached, communicating with a metallic or other "box of any desired shape fitted with an escape valve. The "steam generated in the former chamber passes through the "curved pipe and maintains the metallic box at a constant tem"perature applicable for any purposes where a heat above 212 "degrees Fahrenheit is not desirable, and particularly for the "spreading of medicated plasters."

[Printed, 4*d*. No Drawings.]

A.D. 1864, August 23.—N° 2076.

BOGGIO, GERIN GABRIEL.—"A new or improved process "for extracting the oil contained in the flour of oleagenous seeds, "for distilling, rectifying, and evaporating volatile substances, "for preparing volatile oils or essences and extracts for dyeing "and medical purposes, for dessicating animal and vegetable "alimentary substances, plants, roots, and flowers, and for "ventilating." This consists, first, in "preparing powders, "flours or meals deprived of oils by means of sulphuret of "carbon."

Second, "extracting their oils by the vacuum or by distilla-" tion."

Third, "applying the vacuum to distilling, evaporating, dessi-" cating, and ventilating."

The substances are reduced to a coarse powder in the usual way, the powder is placed in a displacing apparatus, with a tap below, and a cover above, sufficient sulphuret of carbon is added (and kept in contact with the powder) to carry off all the oil in the powder. If enough has not been added, ascertained by a drop or two on paper, more must be added. The apparatus containing the powder is placed in "communication with the " suction valve of a pump chamber, or with a bellows with " suction and forcing valves," which drives it in a condensed state below the water in an ordinary receiver. The same process " is employed for separating the sulphuret from the oil. Steam or hot water around the receivers may be also employed for separating the sulphuret from the oil, but the pneumatic process is preferred.

[Printed, 4*d*. No Drawings.]

A.D. 1864, August 23.—N° 2081. (* *)

BROWN, **David Shaw**.—(*Provisional protection only.*)— " Improvements in the manufacture of lint, and in machinery " employed therein." The inventor says, " Hitherto it has been " the practice to make lint at two operations, that is to say, the " fabric is first woven, and then the fabric is subjected to the " action of a knife to scrape up the fluffy surface theron. Now " the object of my present invention is both to weave the fabric " and form the fluffy surface at one operation."

"I take any loom or machine for weaving, but, by preference, " an ordinary calico loom, and apply thereto a knife or knives, " and a shaft or harness working a false or imitation warp, con-" sisting of fine wires for the purpose of assisting or lending " strength to the warp proper of the fabric being woven, or the " false warp may consist of fine knives for severing the weft " between the threads of the warp; the ends of weft so severed " are thrown to one surface of the fabric, and are teazed to bring " up a fine fluffy surface. Some shoots of weft are left undivided " to hold the fabric together."

[Printed, 6*d*. Drawing.]

A.D. 1864, September 22.—N° 2334.

RHODES, JAMES.—(*Provisional protection only.*)—" Improve-" ments in adapting and applying pneumatic injectors to various " useful purposes." These are adapting and applying " elastic " or compressible vessels of vulcanized india-rubber or other " elastic substance, having a neck or inlet and stopper to intro-" duce and retain fluids, and an aperture through which the said " fluids may be forced by compressure, and which are usually " employed for injecting medicine and for suckling infants," to " brushes or pens for supplying ink or other colouring matters or " liquids " for marking, coloring, &c., and also to " suitable " tubes and spouts, and applying them to contain oil or other " liquids for lubricating." In some cases combining " tin, zinc, " copper, or other metal or rigid material with the elastic sub-" stance in the construction of such vessels," and if they are required for use with a corrosive material, they are lined " with " bladder, gold-beaters' skin, or other animal substance."

[Printed, 4*d*. No Drawings.]

A.D. 1864, September 23.—N° 2337.

VALE, HENRY.—" Improvements in the manufacture of eye " protectors." These are " making the frames of eye protectors " by raising them from sheet metal by dies and pressure, and " attaching the said frames to the wire gauze of the eye protectors " by closing the sides of the said frames upon the said wire " gauze," as follows, cutting " out from sheet metal at a press " ring like blanks of a nearly elliptical figure," these blanks " having at opposite points nearly circular pieces to form the " loops in the finished frame." By means of raising tools and pressure, raising the blanks " into a trough-like form," and at the same time raising and perfecting the shape of the loops at the end of the frame. " Instead of raising the frames from rings of " metal as described, a raised blank may be formed from sheet " metal, the metal inside of and external to the depression in the " the said blank being afterwards removed by cutting dies or " tools. In securing the wire gauze of the eye protector to the " frame, the edge of the wire gauze is placed in the trough of " the frame; the sides of the said frame or trough are then " closed upon the wire gauze, and the said wire gauze firmly

" secured to the frame." By raising the frame from sheet metal according to this method " a very neat frame without a junction " is produced, which is attached to the wire gauze without the " use of solder."

[Printed, 1*s*. Drawings.]

A.D. 1864, September 26.—N° 2354. (* *)

WHEELER, George Printy, and GLOYN, John Fox.— " Improvements in the preparation and application of certain " materials for the purpose of cleaning and polishing the surfaces " of metals, which are also applicable to other purposes."

" We take the slag, dross, or cinder produced from the smelting " of iron, copper, and silver, and subject it to a suitable action of " crushing, grinding, or pulverizing by any suitable machinery or " apparatus, and when it is sufficiently crushed or pulverized we " sift it into suitable degrees of fineness to suit the various pur- " poses to which it is to be applied. The material thus produced " is suitable for cleaning and polishing metals, sharpening knives, " razors, and other cutting instruments, and may be used in the " same manner as sand, emery, and similar materials are now " used for the said purposes, and will be found very superior and " more economical than sand, emery, or similar articles. This " material is also applicable to filtering machines, as it makes an " excellent filtering medium, and will supersede the use of char- " coal, felt, and similar articles used for filtering water and other " liquids. It also makes an excellent cement for covering the " outsides of buildings, covering the surfaces of roads or streets, " either used alone or mixed with other cements. As a cement " for the foundations of houses or other buildings, roads, walks, " or similar purposes, we mix the said powder with lime or other " suitable material. It may also be used alone or otherwise as a " tooth powder. This said powder mixed with soap makes an " excellent material for scouring floors, decks of ships, or other " places; and it also makes an excellent hand soap, which may " be used as a substitute for the ordinary sand soap."

[Printed, 4*d*. No Drawings.]

A.D. 1864, September 30.—N° 2409.

GUMPEL, Charles Godfrey.—(*Provisional protection only.*) —" Improvements in anatomical or surgical appliances for th "support of parts of the human body." These are in trusses or bandages having "two plates of metal or other suitable material "adapted to the form or forms of the part to which they are "intended to be applied" (padded and covered), "connected by "two springs passing over the hips, one on each side of the body, "such springs being fastened to the plates by means of straps "and studs, slides, hinges, or universal joints." One plate supports the abdomen, while the other exerts "a gentle pressure "on the sacrum or lower part of the spine, to which it is applied." "For a case of single hernia a single spring may be employed "passing over the hip on the same side as the hernia, with a pad "for the seat of the hernia and another pad for the sacrum;" it "is fastened to the body of the wearer by means of a band or "strap round the waist." For double hernia two pads are united in front and the two springs pass over the hips. Sometimes combining "with the truss or bandage above described, as "applied to support the abdomen, a padded metal stem or stems "plate or plates, extending from the sacral plate upwards along "the spine to or nearly to the shoulder blades," and fastening the same "by means of a belt or band round the chest, or if "necessary over or round the shoulder or both, whereby a support "is obtained for the breast, the chest, and the spine."

[Printed, 4*d*. No Drawings.]

A.D. 1864, October 1.—N° 2420.

LOYSEL, Edward.—"Improved apparatus for obtaining "extracts from tea, coffee, and other vegetable substances." These are in reference to this subject in constructing apparatus "for making infusions of medicinal substances at divers tempera- "tures and with any menstruum." There is an upper vessel in the bottom of which is a perforated cone on which the substance is placed, and the liquid is poured upon it. This upper vessel is connected to a lower vessel by a tube in which there is a tap. Below the lower vessel, and connected with it by a pipe in which there is a tap, is a small vessel called an "underback" in which there is a small quantity of water, which is boiled by a lamp placed underneath, the steam passes through the tap into the lower vessel and drives the air from it by a small tap opening into the atmosphere near its crown, filling it with steam; when this is accomplished, the tap opening into the atmosphere is closed, the lamp is withdrawn from the underback and "the apparatus is allowed to "remain in this state till the vessel is cool." The steam condenses in the lower vessel and "the water will fall back to the under-"back reservoir," and "an almost complete vacuum" is established in the lower vessel. On closing the tap between the "underback" and the lower vessel and opening the tap in the pipe between the upper and the lower vessel, "the infusion will "instantly percolate downwards" into the lower vessel and leave the substances in the upper vessel "completely drained." The extract may afterwards be drawn off from a tap near the bottom of the lower vessel.

[Printed, 1*s.* 4*d.* Drawings.]

A.D. 1864, October 15.—N° 2553.

RANDLE, Thomas.—(*Provisional protection only.*)—"A new "preparation or compound substance for the eradication of corns, "bunions, worts, and excrescences of the like nature on the feet "or hands." This consists as follows :—"Crushed glass to (in ?) "powder, one pound; sal ammoniac, half a pound; glue, three "ounces; colouring magenta or other colouring dye, six drops." This composition is formed into "a solid mass, in design round "or square, or oblong," as is deemed proper "either with or "without handles. The mode of applying the composition is by "rubbing the parts affected and thereby creating friction."

[Printed, 4*d.* No Drawings.]

A.D. 1864, October 19.—N° 2583.

BUXTON, William.—"Improvements in the preparation of "sheeps' wool for medical purposes." These are wool as it comes from the animal with the grease in it is treated with a solution of "camphor in spirits of wine," "say 2 oz. to 1 lb. of "wool, but these proportions may be varied ;" it is then combed, "by preference, by hand combing, in order to avoid the necessity "for previous washing, or for the addition of other oils generally "required in mechanical combing." In preference, the wool employed is from sheep "a cross between the South Devon and "Leicester or between the Cheviot and Leicester."

"The wool thus treated and brought into a sliver is applicable "for use as a bandage to parts of the body afflicted with gout,

" dipthœria, bronchitis, sprains, affections of the chest, rheuma-" tism, rheumatic gout, neuralgia, lumbago, and other diseases " the result of cold."

[Printed, 4*d.* No Drawings.]

A.D. 1864, November 11.—N° 2808. (* *)

GEDGE, William Edward.—(*A communication from Jules Leclerc.*)—(*Provisional protection only.*)—" An improved sanatory " toilet apparatus ;" namely, a bidet, the exterior of which presents " the appearance of a small chest of drawers, the height " varying from 16 to 18 inches." A hinged lid is prevented by stops from opening too far back. Inside is a moveable frame, beneath which is a vase of porcelain, or other suitable material, fixed by screws. At one side is a crank which turns a shaft extending from side to side and mounted on bearings, one of which has a moveable cap. On the shaft are two "funnel-shaped " compressors," kept in place each by a small spring ; between them is a sponge, and behind is a curved brush for cleaning the sponge, carried by a light bar. To the apparatus is added an enema, which is worked by a small crank. A basin below receives the water from the vase ; the " running off is effected by the aid " of a tap."

[Printed, 6*d.* Drawing.]

A.D. 1864, November 12.—N° 2821.

PAPPS, Francis Adams.—" Improvements in malt liquors as " tonics." These are first, using " a solution of sulphate quinine, " or cinchonine, or quinodine, or other salts of quinine in sul-" phuric acid as an ingredient in the manufacture of malt liquors " as tonics." The sulphuric acid is " diluted with say from nine " to fourteen parts by measure of distilled water." The quantity of salts of quinine may vary, and the proportions preferred, " may " vary from half an ounce to " an ounce and a half to the barrel " of thirty-six gallons, mixed with a corresponding proportionate " measure of sulphuric acid diluted." The quinine solution is added " to the malt and water in the mash tun or to the wort and " hops in the copper, or to the fomenting tun at that stage, " technically termed cleansing."

Second, impregnating " such malt liquors so prepared with " carbonic acid or oxygen gas by any of the processes already " employed in the manufacture of aerated waters."

Both these improvements, it is said, "add largely to the tonic " properties of malt liquors" "rendering them especially beneficial as beverages for persons afflicted with nervous or dyspeptic " complaints, or in hot climates where intermittent fevers " prevail."

[Printed, 4*d*. No Drawings.]

A.D. 1864, November 14.—Nº 2842.

HENRY, Michael.—(*A communication from Jules Guérin.*)— " Improvements in the means of or appliances for treating bodily " injuries, affections, and disorders when atmospheric air is to be " excluded from the part affected." These are, using a "flexible " or elastic impervious casing" fitting tightly on the limb or " other part to be treated and combined with a pneumatic " receiver, or vessel, or chamber, which can be exhausted as " required." As an example applied to a wounded leg, "the " leg is inserted in a vulcanized india-rubber casing shaped " roughly like a boot, just large enough to receive the limb " without painfully pressing upon it, and closed at bottom but " open at the top, the opening being of less diameter than the " part of the leg to be encircled, but, being elastic, it is stretched " to admit the limb, and will immediately close tightly round it." A non-elastic tube is fixed to the casing, the other end being attached to a vessel previously exhausted of air, and the cock is opened, the plastic material will close tightly round the limb. Sometimes there is interposed between the air tight or impevious casings and the skin "a pervious casing or padding," to assist " in drawing off the exhalations and humours, and to prevent " the skin from being blistered from rucks or creases in the " air-tight casing." "For puerperal diseases the impervious " casing may be of the shape of drawers, fitting closely round " the regions of the pelvis, and having round the abdomen an " air cushion," and "an elastic compressible girdle may be com- " bined with it," and there is "a sponge and at one part a " hollow glass ball for receiving the matters drawn off." "The " portable receivers may sometimes consist of cases with flexible " sides" especially expanded by a weak spring. "The extent " of expansion of the case indicates the state of the vacuum " within the casing."

[Printed, 4*d*. No Drawings.]

A.D. 1864, November 18.—N° 2889.

PIESSE, Septimus.—(*Provisional protection only.*)—" Improvements in apparatus for creating and projecting cold vapours." These are, " two tubes with contracted nozzles," are " placed at " right angles or nearly so to each other, and with their nozzles " in close proximity. One of these tubes is connected with a " flexible air-tight bag of india-rubber or other suitable material " or any equivalent apparatus which can be readily retained in the hand, and which " on being alternately compressed and allowed " to expand will direct a jet of air through the nozzle of the first " tube and across the nozzle of the second tube, which tube is " plunged at its lower end either into water, perfumed spirit, " chloroform, ether, ammonia, tobacco juice, or other fluid. The " partial vacuum produced in the second tube by the jet of air " directed across its mouth or nozzle causes the fluids to rise up " the tube in the form of a jet, against which the air impinges, " and thereby breaks or scatters it in the form of a very fine " spray or cloud, the rapid evaporation of which produces a vapour " of a very low temperature. This apparatus may be used for " perfuming the air, the body, or wearing apparel, for cooling the " head, and for cooling generally."

[Printed, 4*d*. No Drawings.]

A.D. 1864, November 24.—N° 2937.

WHITE, John.—" Improvements in means or apparatus employed in purifying, changing the temperature, and impregnating atmospheric air, which improvements are also applicable " to the purification or separation of gases or vapours, and part " of which improvements is also applicable in obtaining motive " power for other purposes." These are first, " the air in motion, " obtained by a fan or other suitable blowing or forcing apparatus " or means, or otherwise," is passed through " wool or other " suitable material adapted to operate by capillary attraction and " hold in suspension water, or other purifying, cooling, warming, " or impregnating fluid supplied from a suitable reservoir." A reservoir is placed with the fluid with filaments, strands, or texture of wool or other material dipping therein sufficient to cause the fluid to rise by capillary action, the outer ends enter a " receiver acting to collect any excess of fluid carried over by

" them " and this fluid may be drawn off from the receiver " by
" a tap or a suitable syphon arrangement."

Second, in giving motion to the air, in preference, using " two
" reservoirs supported from one axis, by which either may be
" brought to be for the time uppermost to admit of the water or
" other fluid contained therein flowing, by a suitable passage or
" series of passages, on to a series of vanes, or otherwise acting
" to give the motive power required, and the water or other fluid
" thence passes into and replenishes the vessel which for the time
" is the lowermost one. Each of these vessels is supplied with a
" valve and an air passage to admit of air passing into or from
" it as the fluid passes out of or into it, but which yet prevent
" the escape of the fluid, except for obtaining the motive power
" referred to when in an inverted position. Air may be purified
" or impregnated or otherwise acted upon by the action of the
" water or other fluid whilst acting to exert power in this appa-
" ratus; and in most cases I prefer that the impregnating
" chamber be also lined with wool or other matter adapted to
" hold water or other fluid in suspension, thereby to facilitate
' action on the air."

[Printed, 10*d*. Drawings.]

A.D. 1864, December 6.—N° 3034.

GEDGE, William Edward.—(*A communication from Louise Thevenot.*)—" A belt and improved sanatory apparatus for female
" use." To an elastic belt or waistband provided with three buttons in the front and three buttons at the back, " fitted to a pair
" of knitted drawers, and which permits these latter to be pulled
" up or down without unbuttoning is fixed " the apparatus " the
" subject of this invention by means of six button holes corre-
" sponding with the six buttons before mentioned." " The
" apparatus is composed of a piece of calico, linen, or other
" analogous material lined with oil cloth or silk; beneath this
" are two pieces of deerskin or similar material one of which is
" placed on the fore and the other on the hind part, in the
" middle is placed a sponge intended to receive the menstrual
" flux. The calico or linen lined with oil cloth is cut sloping so
" as to form a double contiguous plastron or stomacher." " The
" apparatus is first buttoned by one of its ends or plastrons to
" the three buttons on the back of the waistband, the other end

" is passed between the legs and buttoned in front to the waist-" band by means of three button holes." Beneath the sponge is "a semicircular piece of amadou, which is also on the oil cloth, " at the sides are the elastics, which button over the thighs."

[Printed, 10*d*. Drawing.]

A.D. 1864, December 14.—N° 3095. (* *)

THOMPSON, JACOB BAYNES.—" Improvements in coating " iron and steel with silver, gold, platinum, or palladium, and in " ornamenting articles with such metals," among the articles being steel surgical instruments. The alloy, with which the metal is first coated, is composed of 60 parts of tin, 20 of copper, and 20 of nickel; silver or copper may be substituted for the nickel in equal quantities, or silver for the copper and nickel. The nickel is melted first, then the copper is added, and lastly the tin: the surface of the alloy is covered "with a flux, sal-ammoniac, " or borax." The dippings are made as rapidly as convenient; the article is then plunged into melted oil and tallow; the alloy remaining on the surface is wiped off, and the article is plunged into cold water; it is next washed with a solution of caustic potash, and dipped in a cold bath of one part of commercial hydrochloric acid mixed with four parts of water. It is now ready for the ordinary depositing bath. For ornamenting a silver ground with gold and platinum, a pencil is employed made of fine spun glass, asbestos fibre, or hair (sable hair by preference); it has a hole down the middle of the handle for the battery wire. " A strand of fine platinum or gold wires, according to the solu-" tion with which the pencil is used, should be spread out in the " brush part of the pencil, but only sufficiently extended to be " in contact with the solution held in the brush, and these wires " should be connected above through the handle by means of an " insulated copper wire to the positive pole of a battery, while the " article to be ornamented is connected to the negative pole." The solutions used in working with this process " are such as are " employed for electro-deposition in a bath."

[Printed, 4*d*. No Drawings.]

A.D. 1864, December 14.—N° 3098.

WHARLDALL, WILLIAM.—(*Provisional protection only.*)—" Improved machinery or apparatus for the manufacture of

" liquorice cakes, applicable also to the manufacture of other " cakes or lozenges made of plastic materials." This consists as follows:—Two iron standards, at a suitable distance apart, and parallel to each other, are placed on a suitable table. "Each " standard is slotted to permit of a vertical reciprocating motion " being imparted to a hollow rectangular bar (extending from " standard to standard) the turned ends of which work within " the same." To the under side of this bar affixing "a series of " cutters (circular by preference), which may be made of brass of " the diameter required, (or if desired) a brass plate may be " substituted for the separate cutters, each plate having the " desired number of holes bored out." To the upper side of the rectangular bar, affixing "as many guides as there are cutters " immediately over the same," within each guide placing "a " spindle, free to receive a reciprocating motion, and having a " stamp or die affixed to the lower end. Small springs are placed " on each spindle, between the guides and the solid bar, working " between the standards and guided by the same. A lever from " the top bar of the apparatus is used at the required time to " depress the solid bar, and consequently the stamps or dies." The bar carrying the cutters is connected by means of levers to an ordinary treadle.

[Printed, 4*d*. No Drawings.]

A.D. 1864, December 27.—N° 3215.

GEDGE, WILLIAM EDWARD.—(*A communication from Julien Salamon.*)—" An improved apparatus for administering douches " and injections with continuous and continual jet." This consists of "a cylindrical vase made of zinc about 22 inches high " by 14 inches broad, serving for seat to the individual, and as " recipient." Attached to this and in communication with it is a small hollow cylinder in which is a pump barrel in which a piston is worked by a handle at the top. From the upper part of the pump barrel is a "vulcanized india-rubber tube, screw- " threaded at each of its extremities to be screwed by one end to " the pump and by the other to a uterine canula." A small metal tube communicates with the pump barrel above the junction of the vulcanized tube and enters the small hollow cylinder some way below. "This little tube is intended to take the water " which rises above the piston and transmit it into the cylinder" and "thence into the recipient." "The bottom of the vase is

" placed obliquely to avoid the use of too great a quantity of " water, a necessary economy when the water used has been " medicated." On the vase is a concave lid or cover with an " opening cut for the passage of the hand which holds and " directs the canula; it also permits the water to return to the " recipient."

[Printed, 8*d*. Drawing.]

A.D. 1864, December 29.—N° 3229.

MORRISON, James Darsie.—"Improvements in painless " dentistry by apparatus for cooling and tempering air, and " applying it as an anæsthetic agent." These are as follows:— " A powerful double-acting air pump" is "placed between and " attached to two separate series of small strong coiled seamless " copper tubes. This pump is so constructed that whilst with " one half it empties the supply series of tubes, with the other " half it transfers and compresses the air into the reservoir series " of tubes." These tubes are small, strong, and long. The whole apparatus is embedded in ice or water, so as to extract the heat from the air within. "A branch coil from the reservoir " series after being heated with hot water rejoins the main " current in a double screw stop valve cock, to which is attached " a strong flexible tube for the conveyance of either currents of " air to the instrument operated with and through which those " currents are applied directly to the gums." The air is passed into the forceps by a flexible tube attached to the handle of the same through grooves or channels formed through these instruments. The handles are covered with "non-conducting " vulcanite," "the object of which is to prevent the conduction " of heat from the hand of the operator to the passing cold air " within or of cold from the passing air within to the operator " without."

[Printed, 6*d*. Drawing.]

1865.

A.D. 1865, January 3.—N° 16.

ASHTON, Thomas John.—"An improved portable pneumatic " apparatus applicable in surgery and medicine, for all purposes

" as a douche for effusion, irrigation, injection, and for enemas." " The apparatus is composed principally of two vessels (one con- " tained within the other), each vessel being made of an imper- " meable material, the inner one being flexible and compressible " (india-rubber by preference), and the outer one inelastic." Each " of these vessels is furnished with a tube provided with " a stop-cock, but there is no communication whatever between " the two vessels. A small detachable or fixed syringe or air " pump for charging the outer vessel with compressed air is also " provided. The action of the apparatus is as follows:"—The inner vessel is to be filled with the liquid to be used, its stop-cock is closed. Air is then forced into the outer vessel by a syringe or pump as desired. " Upon closing the stop-cock of " the outer vessel, and removing the syringe (if required) the " apparatus is now ready for use," and upon opening the stop-cock of the inner vessel the water or liquid which it contains is forced out, " the force of the stream depending upon the amount " of air that had been previously compressed into the outer " vessel. If a more continuous and undiminished force is " desired, these can be obtained by these means, the stop-cock " of the outer vessel may remain open and the syringe be kept " at work during the operation."

[Printed, 8*d*. Drawing.]

A.D. 1865, January 10.—N° 73.

BROWN, Samuel Shaw. — " Certain improvements in the " manufacture of lint." These are, in linting machines, " instead " of using a single knife cutter or scraper " using " a combination " or series of knives, cutters, or scrapers," which are " to be " bolted or fastened in a similar manner as the knife, cutter, or " scraper is at present secured, or in any other suitable manner," " by which means a greater amount of cloth or other fabric is " manufactured into lint in a shorter space of time and in much " greater quantities than the single knife, cutter, or scraper at " present employed is capable of producing."

[Printed, 6*d*. Drawing.]

A.D. 1865, January 10.—N° 74.

BROWN, Jonathan Clark.—" An improvement in machines " for cutting match splints, tooth picks, and similar articles."

On a bed plate on legs is a cylinder with knives or cutters fixed in its surface; this cylinder revolves freely in bearings "resting " upon or forming part of a slide which is moved to or from the " centre of the machine by means of a screw." Employing " a cutter or knife fixed to another slide which moves to and " from the centre of the machine by means of a screw in the " same manner as the cutting cylinder before described. On a " main shaft supported in bearings and driven by means of a " pulley there are toothed wheels communicating by gearing to " the screws, and on the main shaft I place a round block of " wood, the grain of the wood running nearly parallel with the " cutters," the "block is held firmly and made to revolve with " the shaft by dogs or teeth formed for this purpose." The cutters on the cylinder are forced against the block of wood, so that the cutters will enter the block to the proper depth, and then the pulley and shaft are put in motion so as to cause the block to revolve and with it the cutters, each successive knife or cutter gashing the surface of the block. After being thus cut the knife is brought in contact with the revolving block, and shaves the splints from the block. As the block continues to revolve the cutters and knife are forced up by the screws, gashing and shaving from the surface until the block is nearly cut up. In cutting match splints the cutters should all be parallel, but for cutting tooth picks it is better to arrange them diagonally, so as to form the picks nearly sharp at one end. To further improve the point I arrange a cutter at each end of the block, which will shave off each corner before the splints are cut from the block, so that when they are cut from the block the two ends will be bevilled. It will be found advantageous to steam the wood before placing it in the machine, and afterwards drying the splints.

[Printed, 8*d*. Drawing.]

A.D. 1865, January 13.—N° 112.

SAX, Antoine Joseph.—"Impregnating air for hygienic or " therapeutic purposes, with the vapours or emanations arising " from tar, creosote, or other suitable liquid, antiseptic or anti-" putrid substances, or disseminating in the air for the said " purposes suitable pulverized substances." The "suitable finely " pulverized substances" may be "flowers of sulphur." The tar or other suitable liquid antiseptic substance is in a trough

and the impregnating arrangement consists "of a series of par-
" tition plates, blades, or shelves presenting a larger surface and
" which by immersion or other means may be coated with the
" tar," &c. The impregnating arrangement is afterwards kept in such a position as to allow the air in passing between the partition plates to become impregnated with the vapours arising
" from the antiseptic substance made use of." Or the impregnating arrangement may consist of a sort of small paddle wheel caused to revolve in the trough so as to " present fresh parts of
" the liquid to the air." " By means of a pair of bellows, a fan blower, &c., " the air might be blown between the partition plates
" or between the paddles of the wheel, or caused to impinge on
" the surface of the tar or other antiseptic liquid made use of." There are other arrangements for impregnating the air with these vapours. A small apparatus consisting of a series of perforated plates provided with "tar or other suitable antiseptic or antiputrid liquid " may be worn before the mouth secured by a string tape, &c.

[Printed, 8*d*. Drawing.]

A.D. 1865, February 3.—N° 301.

MOSELY, BENJAMIN LEWIN. — "A new or improved tooth
" powder." This is composed as follows :—" Powdered orris
" root about one-sixth part, permanganate of potassa about ten
" grains; powdered chalk about two-sixth parts; powdered
" cuttle fish about one-sixth part." These ingredients are to
" be mixed under a slow heat, and by degrees about one-sixth
" part of powdered wheat starch is to be added, after which the
" powder may be scented or perfumed at pleasure." The above proportions " may be slightly varied or modified to suit the taste
" or requirements of the public."

[Printed, 4*d*. No Drawings.]

A.D. 1865, February 14.—N° 414.

HINE, WILLIAM CONWAY. — (*Provisional protection only.*)—
" Improvements in stoppering bottles or other similar vessels and
" measuring quantities therefrom." These are, the stopper is made " in the shape of a cap to cover the lip or rim of the bottle
" neck," and flat at the top to stand, and being hollow to form a measure or receptacle which is marked outside or in, by " engrav-

" ing, cutting, casting, or otherwise with any suitable indication " or device, besides being marked to indicate quantities, parts, " or doses of the contents of such bottle or other vessel, as for " instance 5, 10, 15 or other number of drops, drachms," &c. " Such cupped or receptacled stoppers may be made of wood, " cast or blown glass, or other material." "If a graduated " stopper is required for measuring vinegar or other liquid, the " stopper may be on the lower part or bottom of such graduated " vessel." The above is useful in measuring accurate doses of medicine, &c.

[Printed, 4*d*. No Drawings.]

A.D. 1865, February 15.—N° 437. (* *)

EMERSON, ROBERT HENRY.—" A new or improved invalid or " siphon drinking cup."

" I adapt to or form as part of cups or other drinking vessels " a bent tube, forming a siphon, in communication with the " interior of the cup or other vessel; a small opening or air " course penetrates the siphon tube, this opening being easily " stopped or closed by the finger of the attendant in administering the drink or medicine, when the end of the siphon tube " being placed in the mouth of the patient, and the air opening " being closed, a very slight inspiration creates the necessary " vacuum therein, and the contents of the vessel will flow through " the siphon until the vessel is empty, or until the finger of the " attendant is removed from the air hole or opening; or where " the air passage can conveniently be formed within the spout " and parallel to the passage in which the fluid or semi-fluid is " intended to pass from the vessel to the mouth of the patient " the opening by which the vacuum is regulated and the siphon " action produced may terminate close to the nose or opening of " the spout, and the lip of the patient may perform the same " functions as the finger or stopper."

[Printed, 8*d*. Drawing.]

A.D. 1865, February 24.—N° 525. (* *)

ROWE, CHARLES JAMES.—" Improvements in portable invalid " or bed tables." The table is from eight to ten inches high, and is intended to stand on a bed. Each pair of legs is connected by a cross bar which is hinged to the frame; a thumbscrew entering suitably packed sockets keeps the pair firm "either in the "collapsed or extended position." The top may be a fixture, or hinged to the frame and capable of forming a writing or reading slope, or part of the top may be so arranged. The slope is furnished with the usual strut and rack, with a bead at the lower part, and with a thumb ring which serves both for raising the slope and actuating a catch which fastens the slope down. A drawer or drawers may be added.

[Printed, 8*d*. Drawing.]

A.D. 1865, February 25.—N° 537. (* *)

ASKEW, John.—"Improvements in the construction of a port- "able vehicle for teaching children to walk, and giving assistance "to invalids." The vehicle is composed of an upper and a lower rim, both of metal and, by preference, circular; the former is provided with an opening which is secured by a thumbscrew or a lock and key; the latter is mounted on castors rendered soundless by a covering of india-rubber or other substance. To the upper rim are pin-jointed three or more slotted tubes, and similarly fastened to the lower rim are as many tubes or rods sliding in the upper tubes and carrying each a pin which enters a slot. The sliding is retarded by springs coiled round the rods, and the height of the vehicle is regulated by thumbscrews and collars at the lower end of the outer tubes.

[Printed, 8*d*. Drawing.]

A.D. 1865, March 2.—N° 591. (* *)

RAHN, Charles.—"An improved instrument for concentrating "light, applicable to dental, surgical, and other operations."

"The effect of this instrument is to direct an intense light "upon a given spot, and to limit the area of the illumination to "that spot."

"I employ a combination of lenses comprising a condensing "lens and two double convex lenses, the foci of which are "arranged to accord with the distances required by the operator "from the patient."

"I fit this combination of lenses into a cone with draw tubes "having a rack and pinion adjustment carried by a plate made "nurled [milled?] in dovetails. This plate is furnished with "racks, pinions, and screw nuts for adjustment, to enable the

" plate carrying the cone and draw tubes to be raised or depressed " at pleasure upon a plate made to form a screen, and jointed to " a foot or stand. This plate is capable of adjustment by a " tangent screw and nurled [milled ?] nut to obtain any angle of " elevation or depression that may be desired.

" The light may be either disconnected or it may be fixed to " the instrument with any well-known means of adjustment."

The drawing shows a gas burner connected to a vertical bar by an adjustable collar and nut, up and down which the light may be moved as required; the lower part of the bar is formed with a collar and screw nut, working on a horizontal bar to enable the lights to be secured at any desired distance from the plate.

[Printed, 6*d*. Drawing.]

A.D. 1865, March 13.—N° 706.

NAPIER, William Donald.—(*Provisional protection only.*)—" Improvements in apparatus to facilitate dental operations." These are, in stopping teeth, instead of placing a napkin in the mouth to absorb the saliva, constructing an apparatus by which it " is caused to flow away from the mouth as quickly as it is " secreted. For these purposes a tubular or hollow frame, con- " sisting of two hollow branches, is introduced into the mouth " and is retained in position by the lips of the patient." The stem of this frame is connected to one end of a flexible tube whilst the other end is connected to a short tube which descends through a stopper of a bottle or small vessel, partially exhausted by a suitable pump connected to it by a flexible tube arranged so as to admit of the patient working the pump. " When using " the apparatus the suction end of the tube is to be introduced " on the opposite side of the mouth to that on which the tooth " to be stopped is situated."

[Printed, 4*d*. No Drawings.]

A.D. 1865, March 28.—N° 874.

GASCON, Alexandre Denis.—(*A communication from Alexandre Gascon.*)—" A new febrifuge and digestive elixer." This consists as follows, in " a quart of good brandy " is put " about " two ounces of socotrine alloes or aloes perfoliated," " three " drachms of zedoary," " three drachms of white agaric," " three " drachms of gentian," " three drachms of saffron," " three

" drachms of rhubarb," and "three drachms of theriaca." "The " whole is pulverized and left to infuse about fifteen days, when " it is decanted and kept for use. After the elixer is prepared it " can, if desired, be employed immediately or at any future time." " The precise details or proportions of ingredients herein laid " down" may be varied.

[Printed, 4*d*. No Drawings.]

A.D. 1865, April 10.—N° 1016.

STEWART, Allan.—(*Provisional protection only.*)—" An im" proved abdominal and scrotal bandage." The object of this invention is "the support of the lower abdominal muscles, the " penis, and the scrotum." "The abdomen is supported by a " bandage buckled round the pelvis, held in situ by a brace, " which pulls up the front only of the bandage. The scrotum is " held above the level of the perinæum by a case attached to the " abdominal supporter, kept in situ by a tubular elastic strap " running in a case attached at each side of the perinæum, pass" ing round the thigh to fasten on the front of the abdominal " bandage. The penis is supported by a flap which is a conti" nuation upwards of the scrotal case, and fastening upon the " abdominal bandage."

[Printed, 4*d*. No Drawings.]

A.D. 1865, April 15.—N° 1069. (* *)

HARDING, Thomas Edward.—(*Provisional protection only.*) —"A new or improved table and support for invalids." The base of the support is a rectangular wooden frame to which is hinged the supporting frame; behind and at the upper part of the latter are jointed two pawls taking into notches cut in the base. This frame is filled in with any fabric or with plaited cane, but by preference with sacking and eyelet holes for lacing. Cross bands with buckles to support pillows or cushions, and arm rests " having hinges shutting upwards," are added. The table is an oblong box on four short legs, the lower part being arched; it has "three separate lids with hinges which when all closed form " a flush table surface." The middle lid is provided with two catches for book rests and with a strut and rack behind; "under " this portion of the table is a shallow receptacle for a slate."

The other two divisions contain whatever may be required by the patient. The legs unscrew and can be replaced by longer ones.

[Printed, 4d. No Drawings.]

A.D. 1866, April [illegible].—Nº [illegible].

NEWTON, Henry Edward.—(*A communication from Auguste Guérin.*)—"Improvements in invalid carriages." These are, first, "the construction of vehicles of all descriptions for the conveyance "of invalids in such a manner as to be air-tight, so as to admit "of the air being compressed therein and prevented from "escaping from the interior through a suitably constructed "valve."

Second, the mode "or any modification thereof for procuring "and maintaining an atmosphere of compressed air in such "vehicles."

The carriage is made of strong and seasoned wood, the different parts of which are strongly jointed and screwed together, and then covered with sheet iron of a sufficient thickness to resist considerable pressure. Where the iron and wood join, caoutchouc or other suitable material may be introduced to render these parts completely air-tight. Caoutchouc or other suitable material is also put round the doors and windows of the vehicle for the same purpose.

The compression of the air in the interior of the carriage is effected by means of two small air pumps placed in a box under the seat, and "they are worked by means of a rocking shaft and "levers connected with eccentrics fixed on the hind wheels." The air from the pumps passes by a pipe up the back nearly to the top of the carriage. The air passing into the pumps passes through a porous material which "may be supplied with any "medicaments suitable for the disease to be treated." A valve provided with an adjustable spring, "situate in the roof of the "vehicle, serves to regulate the degree of compression of the air "in the interior."

[Printed, 4d. Drawing.]

A.D. 1866, April [illegible].—Nº [illegible].

GEDGE, William Edward.—(*A communication from Bernard Müller.*)—(*Provisional protection only.*)—"Improved apparatus "for administering nourishment to the sick or infirm." Two forms of apparatus are described; the first consists of a metal stand forming a lamp and heater above, in this stand is a moveable pot, the contents of which will vary. "This reservoir or "pot" may "be raised or lowered nearer to the fire by means of "a rack, and the liquids be kept at the desired temperature. "The fire-place is formed by a night-light or lamp, which affords "the double advantage of heating the drink contained in the "reservoir and of lighting the chamber." Beneath the lid of the reservoir is fitted a flexible tube terminating in a spring which moves a valve and a mouth-piece in form of a nipple for sucking. The second is "composed of a cup and saucer." A flexible tube ending in a nipple at its outer extremity has its inner end fitted to a block of glass or metal, "acting as a counterpoise, and "intended to keep it at the bottom of the cup, the piece of glass "or metal having openings to facilitate the sucking up of the "liquid contained in the cup." This apparatus permits the nipple to reach the mouth of any person placed in any position.

[Printed, 6*d*. Drawing.]

A.D. 1865, April 24.—N° 1141.

GEDGE, William Edward.—(*A communication from Louis Auguste Rigaux.*)—"An improved pessary." This consists of a cap or cup which may be made of wood, metal, or other suitable material; its shape is oblong and narrower at one end. This cup is pierced in the centre by an oval or round opening to permit the passage of the urine, and at a little way from the narrow end of the cap is a small stem made of leather, caoutchouc, or other elastic material, and carrying at its end a screw thread along which may move a washer to be secured in position by a nut. In using this apparatus it is introduced into the uterus by the broader end so "as to come immediately under the wound in the "matrix, then on turning the washer until it comes in contact "with the abdomen, the apparatus becomes fixed as required for "its proper action." "When this apparatus is made of wood it "should be coated with wax to make it act more perfectly."

[Printed, 8*d*. Drawings.]

A.D. 1865, April 27.—N° 1185.

NEWTON, William Edward.—(*A communication from Thomas Uren.*)—"Improvements in artificial arms and hands." These are constructing a hollow artificial arm of wood with the upper end thereof formed to receive the stump of an upper amputation, with wings on each side of the shoulders, to each of which wings are secured a series of straps passed over the shoulders and across the back to the back part of the shoulder of the amputated arm, where it is provided with a buckle to receive the first strap, so that by the slightest motion of the stump arm from the muscles of the shoulder, motion will be imparted thereto, and all strapping across the chest will thus be avoided. The lower arm is hinged to the upper arm, and the wrist-piece is fitted thereto by a flute joint, so that the hand may be turned to any position desired. The hand is in one piece as far as the knuckle joints, and is made hollow, having two metal plates let into the rear part of the fore and little finger with a rod passing through the two plates forming the knuckle joints of all the fingers; the thumb, being fitted to a socket in the hand, is connected by a joint similar to the fingers, the forefinger is separate from the other three fingers, they being formed in one piece and so attached as to move together. A contracting cord is attached to the inside of a block forming the three fingers which passes back through the hand into the wrist-piece to the outside thereof. Another similar contracting cord is also provided for the forefinger and thumb; there are also expansion and contracting cords running through the arm passing over rollers to a coiled spring, and from thence to the straps connecting the artificial arm to the body, so that by simply moving the stump all the most essential motions can be given to the artificial arm and hand.

[Printed, 2*s*. 4*d*. Drawings.]

A.D. 1865, June 13.—N° 1597.

HEMINGWAY, Charles Alfred. — (*Provisional protection only.*)—" An improved cased splint for fractures." This consists in place of using " loose bolsters with loose straps and loose ban-" dages and splints," using " a casing of leather or other material " of such shape and length as may be required to envelope the " fractured part it may be desired to splint, and provided with " straps which may be relaxed or tightened as occasion requires." The inner side of the casing is padded and lined with pockets, into which are introduced " splints of steel, zinc, tin, or any suit-" able substances." Holes are pierced through the leather, &c.,

to allow of the evaporization of moisture. "The distance of the "splints from each other may be regulated according to circum-"stances."

[Printed, 4*d*. No Drawings.]

A.D. 1865, June 28.—N° 1727.

BOTHAM, WILLIAM.—"A new and improved food or fluid "regulator for feeding bottle and other tubes." These consist "of a small dome or other shaped hollow piece of india-rubber or "other suitable elastic material or compound, which is to be "fitted on the end of a glass, metal, or other tube, and after-"wards inserted into the india-rubber tube belonging to the "feeding bottle." The "domed or other shaped surface is per-"forated with a series of leech bite valves, which open and allow "the food to pass through as soon as a child or person begins to "suck." "Another example consists of a hollow dome or other "shaped piece having the cylindrical flange turned upwards and "enlarged, so as to leave a space between the dome and flange," to fit by its rim or flange on to the end and outside of a glass or "metal, india-rubber, or other tube, which is placed in the "feeding bottle." The valves may be formed in the same way as in the first example.

[Printed, 6*d*. Drawing.]

A.D. 1865, July 6.—N° 1780.

BEIGEL, HERMANN.—(*Provisional protection only.*)—"Im-"provements in the means of obtaining or producing oxygen, "applicable to various useful purposes." These are adding to about 100 pounds of a saturated solution of chloride of lime "about half an ounce of oxide or salt of nickel or cobalt." The chloride of lime is decomposed, oxygen being eliminated and set free, "and if the process is effected in a close vessel, a tube or "pipe will conduct the gas as required." It is also proposed "to mix the ingredients in the dry state, and to eliminate the "oxygen from the lime by the addition of water, so that the "powder may be packed and rendered easily portable and ready "for use." Among the uses to which oxygen thus prepared may be applied are named "to ærate or oxygenate water, to purify air in hospitals," &c., and for inhalation. "For inhalation or "ærating waters the process should be conducted in a closed

" vessel." " By adding fresh quantities of chloride of lime, the " generation of oxygen may be continued without the addition " of cobalt or nickel, which undergo no change during the " process."

[Printed, 4d. No Drawings.]

A.D. 1865, July 19.—Nº 1816.

DUFRENÉ, Hector Auguste.—(*A communication from Francisque Massot and Auguste Juquin.*)—" An improved self-acting " apparatus for obtaining a circulation of volatile liquids." This consists " of two recipients placed one over the other, and com" municating together by means of two tubes open at each end. " The first tube is immersed to the bottom of the lower recipient, " and opens at the level of the bottom of the upper recipient; " the second tube rises to a certain height in the upper recipient, " and plunges in the lower one something less than the first." " The tubes being so disposed, if a volatile liquid is poured in " the lower recipient and caused to be heated, the vapour pro" duced will determine a pressure which will cause a portion of " the liquid to rise through the first tube into the upper reser" voir; but the level of the liquid falling at the same time in the " lower vessel will become level with the lower extremity of the " second tube, and consequently the steam, forming pressure, will " escape, whereupon the liquid which has been raised, having no " longer any resistance, will fall by its own weight into the lower " vessel, and if the fire is not removed it will rise as above " described, to descend again, and so on indefinitely so long as " the fire remains lighted, and there is liquid in the lower vessel " above the level of the bottom of the second tube." This circulation of water or volatile liquid can be used for making infusions of different substances including " pharmaceutical and colouring " principles."

[Printed, 8d. Drawing.]

A.D. 1865, July 24.—Nº [illegible]

BROOMAN, Richard Archibald.—(*A communication from Philippe [illegible] de Clermont.*)—" A new or improved instrument " to be employed in examining and facilitating operations in the " throat." This consists of two jaws jointed to each other. The upper jaw has a handle and from the point of junction to the fore end of the same it is bent or curved. The fore end carries a reflector to reflect the interior of the throat. When the instrument is closed the fore end of the lower jaw is kept by the action of a spring against the under side of the upper jaw. When the instrument is inserted in the mouth the handle is moved, and the upper jaw bears against the palate, while the lower jaw "forces " forward the base of the tongue and exposes the epiglottis. A " body of light is directed on to the reflector, and the space " between the jaws of the instrument allows of the insertion of " any other instrument desired."

[Printed, 10*d*. Drawings.]

A.D. 1865, August 17.—N° 2123.

LAURENCE, OSCAR.—(*Provisional protection only.*)—" A new " medicine for the cure of the diseases of the stomach (dyspepsy, " cardialgy, indigestion) and the hemorrhoids." The medicine is composed as follows:—" 2 oz. socatrine aloes, ½ oz. zedodry, " ½ oz. gentian, ½ oz. rhubarb, ½ oz. agaric, and ½ oz. saffron, " mixed together with 1 gallon of pure corn brandy, is prepared " by distilling at a moderate heat during eight days, and when " strained through linen, and cool, will be fit for use." "The " prescription is two table spoonful in the morning before " breakfast and the evening before going to bed."

[Printed, 4*d*. No Drawings.]

A.D. 1865, August 19.—N°. 2143.

WOOD, WILLIAM, and WOOD, JAMES WILLIAM.—(*Provisional protection only.*)—" Improvements in the manufacture of " pomfret cakes, rolls, and pipes, and of lozenges, and in appa- " ratus to be used in the manufacture of such articles." These are, first, a thin layer of liquid or pasty liquorice mixture or other material is laid on to a prepared surface, then dried, and this repeated until the desired thickness of cake is obtained, when it is removed and can be made into the above articles.

Second, forming pomfret cakes and lozenges direct from the liquid or pasty material by means of repeated thin layers as above on dies of the desired form, pattern, and size.

Third, forming sheets, rolls, or pipes by dipping suitably prepared sheets, plates, cores, or rods of metal glass, &c., in the above liquorice mixture, drying and dipping until of the desired thickness, "the sheets, rolls, or pipes may then be formed into "cakes or lozenges."

Fourth, forming as above, sheets, cakes, and lozenges by alternate layers of liquorice material and powdered dry sugar, &c.

Fifth, rotating slowly a cylinder or endless sheet of copper, &c. in an enclosed space, and in contact with feed rollers, or a short endless sheet, revolving in a trough or cistern, acquires a film of liquorice material, which is dried by a current of air or otherwise passing through the enclosed space, and this is repeated until the desired thickness is obtained, when the sheet is removed and used.

Sixth, dies are attached to a cylinder, &c., and proceeded with as above, and endless chains or discs, &c., to which are suspended sheets, plates, &c., are dipped into liquorice material, and proceeded with as above.

The above surfaces are coated with a thin film of oil, fat, &c.

Seventh, dividing the rolls, pipes, cakes, &c. "into the required "thickness by means of circular or other saws or cutters."

[Printed, 4*d*. No Drawings.]

A.D. 1865, August 29.—N° 2224.

WHITE, George Frederick, and CHAMBERLAIN, Harvey.—"Improvements in apparatus for elongating and contracting waist and other belts, which apparatus is also applicable "for other purposes." These are, "a disc or circular plate of "metal or other material" has "one or more volute grooves, "such plate being mounted on a central pin on which it rotates. "The pin may either be on one end of the parts to be drawn "closer or thrust asunder, or it may be on an independent piece, "and the grooved disc arranged to operate on and intermediate "of the two parts to be drawn together or thrust asunder for "elongating or contracting purposes. The volute groove receives "a pin of the part to be contracted or drawn closer by the disc. "By rotating this disc in one direction or the other, the required "expansion or contraction will be effected. By employing two "volute grooves in the disc, whose axis is mounted on a piece "intermediate of the two parts it is desired to separate (elongate) "or contract, the extent and rate of the motion will be multiplied two-fold." Among the applications to which the above apparatus is said to be suitable, are "surgical bandages and other "like purposes."

[Printed, 8*d*. Drawing.]

A.D. 1865, September 6.—N° 2290.

GIBSON, THOMAS CHARLES.—(*Provisional protection only.*)— " Improved machinery for mixing or grinding ointment, paints, " drugs, and other substances." This consists of a flat-bottomed cylindrical pan "bolted at its opposite sides to standards which " raise it above the floor. At the top of the standards there are " two bearings to support a horizontal shaft which is provided " with suitable driving gear. Over the centre of the pan there " is a short vertical shaft bolted underneath a horizontal cross " plate carried by the standards, and to the lower end of this " shaft a spur wheel is keyed fast. The main driving shaft " turns in the bearings of the two pedestals at the top of the " standards, and to it is keyed a bevil wheel. It may also be " fitted with a fly wheel and a driving pulley. The bevil wheel " gears into a bevil wheel mounted loosely on or surrounding the " central shaft and keyed to a horizontal plate. This plate " carries two or more pinions in gear with the centre stationary " spur wheel. These pinions revolve round the spur wheel with " the plate and also on their own axes; scrapers are also fixed to " the plate and project to the pan's side. The pinions carry " arms to which mullers or stirrers are fixed, and these are thus " caused to revolve with excentric revolutions all over the surface " of the pan, and effectually to operate on the entire contents of " the pan. The mullers have in each of them a self-acting spring " by which any amount of pressure can be applied."

[Printed, 4*d*. No Drawings.]

A.D. 1865, September 27.—N° 2470.

FARR, ARCHER.—(*Provisional protection only.*) — "A new or " improved receptacle for tooth powder, and for conveying the " same from such receptacle to the tooth brush, so as to " economise the use of the powder, and to prevent the escape of " the perfume with which it may be scented." This is named " 'the Ampula,' signifying a bottle or flask; it is composed of " three parts, the body or receptacle, a perforated nipple which " screws on to the body, and a cap covering the nipple." The nipple may be either screwed on at the neck or may be made in one piece with the body and be screwed on to the base of the bottle.

[Printed, 6*d*. Drawing.]

A.D. 1865, September 29.—N° 2504. (* *)

DAVIES, George.—(*A communication from William Henry Van Nortwick.*)—"An improved reclining chair," applicable for the use of invalids and also especially intended "as a sleeping chair "for railway carriages." The front and hind legs are united by "side and cross rails. The seat is hinged near its front edge to "the front legs, so that "it can be made to assume a horizontal "or an inclined position." The back is a light frame hinged at bottom to plates which are secured one to each of the hind legs or side rails, or to both. The rear end of each arm is hinged to a side of the back; the front end is pin-jointed to a bent lever which is pin-jointed to a side of the seat. A rod is jointed at one extremity to each bent lever (about midway between the bend and the pin) and at the other to a side rail. To the inside of the front rail of the seat is fixed a bracket carrying a pin on which a lever is hung; to the short arm, but on opposite sides of its fulcrum, two rods are jointed whose ends pass through, and are guided by, openings in the sides of the seat; the projecting ends serve as stops for retaining the bent levers in position. The ends of the rods and the edges of the bent levers are bevilled, and a spring tends to keep the ends of the rods projected outwards. There is a modification described of the arrangement of the arms; there is also a description of a sliding and folding leg and foot rest which may be added to the chair.

[Printed, 8*d*. Drawings.]

A.D. 1865, October 5.—N° 2555.

BARKER, William Robert.—"Improvements in apparatus "for administering injections and douches to the human body." These are, applying a "bag or reservoir with its internal tube to "the pump or syringe and injecting tube, and also the use of "such bag or reservoir detached from the pump," as follows:— The apparatus consists of a flexible tube of india-rubber, &c., with an elastic or inserting tube at its extremity. On this tube is a pump composed of an india-rubber receptacle fitted to the tube "by means of metal flanges, within which non-return or clack "valves are set. Towards the other end of the tube a nozzle is "attached having a mill edged flange to enable the operator to "turn it;] below this flange is a hollow stopper having a pro- "*jection* or clutch on its periphery, below which the tube con-

"tinues, and is terminated by a hollow metallic inlet tube." The last portion of the flexible tube, flange, and stopper is to be applied to a flexible waterproof bag containing the liquid to be used as an injection enema or douche, "and having a mouth with "a metallic neck with a stopper, the tube descends to the bottom "of the bag." The metallic neck has a horizontal slot or groove for the projecting clutch to turn in, and so secure the tube to the bag, when compressing the pump with the hand. "The materials "named may be varied as may be found desirable."

[Printed, 6*d*. Drawing.]

A.D. 1865, October 10.—N° 2613.

NICHOLLS, Arthur.—"Improvements in rules for measuring, "and in other instruments or articles requiring to be adjusted or "disposed at various angles." These are, constructing "the "instrument or article with a joint, hinge, connection, or fitting, "consisting of a 'middle plate' or turning plate, bar, or piece "or the working part thereof of a polygonal figure, or a figure "having any desired number of sides or angles, which may be "either pointed or rounded off," and in the head, socket, frame, or part in which it works, fitting "a spring in such position that "it will act on the middle or working plate or piece, and hold it "in any desired position to which it may be moved, but yet "allow of its position being shifted when required. The middle "plate may sometimes be toothed, notched, or serrated so as to "form a sort of ratchet wheel or disc, a spring catch, pawl, or "clawker engaging in its teeth or notches. A thumb spring may "be used to retain the middle or working plate at any required "position. A screw may be fitted in the joint or contrivance "above described to act on the working plate, bar, or piece." This invention it is said may be applied to a number of purposes which are named, among which are surgical instruments.

[Printed, 8*d*. Drawing.]

A.D. 1865, October 21.—N° 2721.

KITCHEN, William Hills.—"A new or improved apparatus "for producing artificial respiration." The object in view is "making the air passing into the lungs to exceed the pressure "of that which surrounds the external surface of the chest, "the expiration being made into a medium not exceeding the

" pressure of the air surrounding the external surface of the " chest, likewise for varying the atmospheric pressure on the " external surface of the chest." To carry out this it is proposed to insulate the whole of the body in an air-proof chamber or couch in which are fitted two chambers named "the inhaling and " exhaling chambers, the air in which is put in connection with " the respiratory organs of the persons using the apparatus by " means of two tubes leading through a valve under the control " of the person within the couch to a mouth piece which is placed " in the mouth. The inhaling chamber is put in connection " with the external air by means of a valve. A communication " is effected between the chamber and the couch by means of " another valve, while the couch itself communicates with the " exhaling chamber by means of a third valve. If it is desired " that the pressure of the air within the couch shall fall no lower " than that which is required for inhalation" the valve "in the " inhaling chamber is removed, and the respiratory organs are " thereby put in direct communication with the external air. " The pressure of the air in the couch is prevented from falling " below a certain point, or is regulated by so graduating the " valves above mentioned between the inhaling chamber and the " couch, and the couch and the exhaling chamber, and by so " withdrawing the air from the exhaling chamber by means " of an air pump or other apparatus attached to the exhaling " chamber that the two valves above mentioned will always be " in equilibrium," &c.

[Printed, 8*d*. Drawing.]

A.D. 1865, October 25.—N° 2749.

CLARK, WILLIAM.—(*A communication from Aloys Büngens.*)— " Improvements in bath apparatus." These are, "the applica- " tion of an ascending and descending jet or shower, the force " with which it is projected being regulated by the quicker or " slower action" of a pump according as required, which is readily produced by the person taking the bath seated as follows: —A bath of a circular form forms a seat, perforated with holes for the passage of water. In front of it is a pump actuated by a handle, which is easily worked by the person (or otherwise) seated on the bath; this pump conveys the water through a tube which delivers it over the head of the person having the bath.

[Printed, 1*s*. 4*d*. Drawings.]

A.D. 1865, November 1.—N° 2813.

BOISSONNEAU, Auguste. — " Improvements in artificial " eyes." Dividing the artificial eye into two halves; the first half is " styled temporal and the second nasal or caruncular." It is said that " heretofore an artificial eye prepared for the right " side of the head could not be used for the left side and vice " versa; its upper internal section styled unguinal, from the " bone near which it fits, was hollowed out for the double " purpose of favoring the upward motions of the apparatus, and " of preventing a pressure, always painful, upon the unguinal " bone. Again the lower internal section has never been hollowed " or modified in any way with the view of adjusting the nasal " part of the artificial eye to the inner space (caruncular region) " to which it corresponds." " This invention consists in forming " artificial eyes" with a hollow in the lower internal section. " The proportions of this hollow cannot be fixed, on account of " the variety of proportions of soft organic parts to which the " artificial eye has to be fitted." By the above means " the " upper and lower parts of the artificial eye being symmetrical " are made applicable to either the right or the left side, whereby " more complete harmony is established between the circumference " of the prosthetic part and the organic sinuosities."

[Printed, 4*d*. Woodcuts.]

A.D. 1865, November 7.—N° 2871.

HIDES, Henry.—" An improved splint for surgical purposes." This consists " of a combination of materials which when applied " to the limb are in a plastic state; so that they can readily " be moulded to the required form, but will harden in about half " an hour." The splint is composed of felt " upon which is " cemented a layer or lining of chamois leather " or in place of chamois leather a lining of silk. " When the splint is to be " applied, after having cut the material to the required form the " felt side is to be saturated (by means of a brush or otherwise) " with the hardening solution " made of about " borax 6 grains, " gum benzoin 2 scruples, and gum sandrac or juniper 5½ ounces " dissolved in about one pint of methylated spirit. The splint " being now in a plastic state is fitted to the limb with the " leather side inwards, and being plastic it will readily adapt and " mould itself thereto. The bandages are then applied in the

" usual way, and in about half an hour (more or less according " to the temperature) the splint will have become perfectly " hard."

[Printed, 4*d*. No Drawings.]

A.D. 1865, November 7.—N° 2873.

BENNETT, FRANCIS GRAHAM.—" Improvements in apparatus " for facilitating the walking of invalids." These are as follows: " The apparatus is composed of a horse-shoe of wood about " 3 feet in length, and mounted when for out-door purposes on " three wheels, one placed at each end of the horse-shoe of wood, " and one carried from the curved central position of the horse-" shoe; from the horse-shoe are supported a pair of crutches; " the crutches at their lower ends are received into cylindrical " sockets of brass fixed to uprights of wood let into the horse-" shoe, and are capable of being raised or lowered in these " sockets, and fixed by set screws; the crutches may thus be " fixed at any required height." When the apparatus is for in-door purposes the horse-shoe is supported on castors in place of on wheels.

[Printed, 8*d*. Drawing.]

A.D. 1865, November 24.—N° 3017.

READER, CHARLES.—" A new or improved elastic belt or band " truss." This is for " the prevention, relief, and cure of hernia, " prolapsus uteri, uterine hemorrhage, and hernia humeralis, " and as a general support for enlargement of the abdomen. It " consists of an elastic belt or band which is passed round the " body, and lies in such position that the whole of the spring " of the elastic material will tend to keep a pad pressed upon the " ruptured part, or other part required. The elastic belt or " band is restrained and kept by its elasticity from getting lower " on the body than where originally placed, and it is prevented " from rising by two other narrower elastic belts or bands stitched " at one end of the pad." The other ends of the two elastic belts or bands are provided with leather, &c., each cut to form a button hole to be passed over buttons, &c., secured to pieces of leather, &c., fastened on various parts of the first mentioned elastic belt or band. " The two narrower elastic belts or bands " (which are passed through between the legs) lie across the

" thighs." The first mentioned pad may be formed of one or more pieces, a soft substance inside and leather outside. If the belt is leather it is lined with a soft substance. "In each " case a number of holes is punched in the leather to assist " ventilation."

[Printed, 1*s.* 4*d.* Drawings.]

A.D. 1865, November 30.—N° 3072.

DIXON, STEPHEN.—(*Provisional protection only.*)—" Improve-" ments in the manufacture or production of stays, corsets, and " bodices, and other similar articles of dress, and in the fasten-" ings for the same." These are, first, making them entirely from looped or elastic fabrics. Second, making them with an elastic or other like under side between which and the upper portion is a layer or layers of down of some bird, or of silk, or other down, either in combination with other materials or otherwise, as described in No. 245, A.D. 1864, or these articles are " made wholly or partly of down, or of fleecy hosiery, either alone " or in combination with down, to permit free ventilation or " evaporation of heat from the human frame." It is stated that these stays, &c., are advantageous " for persons suffering under " spinal affections. Surgeons may have them in assorted sizes " and make marks on them as to size and situation for inserting " bones, pads, supports," &c.; it is " also applicable (in part) " to belts, thigh pieces, knee caps, and other articles made of " elasticated materials employed for surgical and other like pur-" poses." One of the modes of fastening used for the above consists " of a hollow button, which revolves on a pin or axle " with plate thereunder, in which is a segmental or quadrantal " groove; as the button revolves the groove in the plate will " slide over a stud so as to form a lock; or a circular plate, " plain or ornamented, and grooved or slotted as before men-" tioned may be used;" and sometimes in lieu of a groove using " a segmental bolt, which might pass through an eye on the " opposite side of the stay, &c., the like may be accomplished " by a lever hook falling into a stud on the opposite side. Also using " elastic material attached to one side of the stay, having " button, eyelet, or stud holes to button or hook on to the oppo-" site side of the stay." Other modifications of this mode of fastening are described.

[Printed, 4*d.* No Drawings.]

A.D. 1865, December 2.—N° 3093.

ASH, George.—" Improvements in securing artificial teeth in " the mouth." These are securing " the bed plate more solidly " by so arranging it that a vacuum or partial vacuum may be " formed and maintained between it and the interior of the " mouth." For this purpose a hole is formed through a cavity in the base or plate, and into this hole or cavity a diaphragm is fitted, " either elastic in itself, or else supported by a spring " which tends to press it away from or out of contact with the " palate or gum. In fastening the teeth in the mouth the finger " is pressed on this diaphragm (or the diaphragm is otherwise " depressed), and the air is thus expelled from beneath it. On " the finger being removed the spring presses up the diaphragm, " and so a partial vacuum is formed beneath the base plate, " which is thus caused to adhere with sufficient force by the " pressure of the atmosphere." In order " to ensure an air-" tight joint with the palate or gum, around the diaphragm " a piece of thin gutta percha," leather, &c., is secured " to the " under side of the base or plate around the diaghragm, and its " edges, which should be left loose, rest on the palate or gum, " and when the partial vacuum is formed beneath the leather it " adheres closely and makes a perfect joint."

[Printed, 6*d*. Drawing.]

A.D. 1865, December 4.—N° 3114.

NEWTON, William Edward.—(*A communication from Thomas Uren.*)—" Improvements in the construction of artificial arms.

This relates to various improvements upon No. 1185, A.D. 1865, and consists, first, in using a cord to hold the fore arm in a horizontal position, when required, by providing such cord with a hook whereby it may be attached to a pin or its equivalent situated near the wrist, so that it may be held for any length of time without fatiguing the elbow joint.

Second, to the opening and closing the forefinger and thumb of the hand by passing cords from the joints of the fingers to a coiled spring, which keeps them closed; this spring is connected to a lever, the end of which projects from the inside of the hand into an opening at the wrist, so that a cord may be *hooked* on to it, the cord passing outside the arm through guides to the shoulder straps, the motion of the cord by the action of the shoulder opening the hand.

Third, in the use of a cord for raising the fore arm; this cord is secured by both its ends to the fore arm, and passes through guides on each side of the upper arm, thus making a loop in the cord which passes to the shoulder straps, so that by using the muscles of the shoulder the fore arm will be lifted up.

[Printed, 1*s.* 8*d.* Drawings.]

A.D. 1865, December 5.—Nº 3126.

COWPER, Edward Alfred.—(*Provisional protection only.*)—“ Improvements in apparatus employed in grinding corn and “ other substances capable of being ground by millstones.” These are, in place of exhausting the air from the casing of millstones, by which “ a current of air passes up the spout down “ which the flour is falling and carries away with it some of the “ finer particles of the meal or flour,” placing at the bottom of the meal spout a small revolving wheel, like a water wheel, “ partially enclosed in a case nearly fitting the same, communi- “ cating at the top with the spout, and having an exit at the “ bottom for the exit of the meal.” Two such “ wheels may be “ employed working close to each other.” Or a series of buckets like a Jacob's ladder, may be similarly arranged. Or a hollow cylinder “ having an apperture in one part of its circumference, “ is made to revolve inside a closely fitting casing communi- “ cating at top with the meal spout and open at bottom.” Or “ two throttle valves are placed a certain distance apart in a “ vertical meal spout, and are caused to rotate, so that when “ the one is open the other is shut, and vice versa;” or in place of the valves revolving in the spout, sliding them “ backwards “ and forwards across the spout,” “ care being, however, taken “ that one valve is closed before the other opens.” Or, in place of valves, the meal spout is made “ of a flexible material,” and it is alternately closed “ at two or more points by pressing it “ together from the outside.” This invention, it is said, although “ more particularly applicable to the grinding of corn,” may also be advantageously applied to the grinding of other substances “ capable of being ground by millstones,” such as drugs, &c.

[Printed, 4*d.* No Drawings.]

A.D. 1865, December 12.—N° 3202.

EASBY, Christopher.—" An improved truss." This consists as follows:—Using " an ordinary steel spring waistband, but " instead of affixing the pad directly thereto, mounting it " upon " a short arm, one end of which is circular, and passed through " a collar at the top of the pad, and the other flat for being " secured to either end of the waistband. The collar at the top " or back of the pad allows it to slide along the pin or circular " par of the arm, upon which it can be adjusted longitudinally, " and fixed by a set screw at the top of the collar as required. " This mode of mounting the pad also allows it to turn upon " the pin, so that it can be adjusted at a greater or less angle " with the band vertically, and fixed in position by a second set " screw. The flat part of the arm has two perforations, one circular and the other in the form of a segmental slot, through " each of which a screw is inserted for securing the arm to the " waistband; the arm radiates upon one of the screws, and is " fixed in position by tightening the other, which passes through " the segmental slot; by this means the pad has a third or radial " vertical adjustment."

[Printed, 8*d*. Drawing.]

A.D. 1865, December 15.—N° 3253.

RANSFORD, Richard.—" Improvements in the manufacture " of bichloride of carbon and chloride of sulphur." These are, taking bisulphide of carbon, mixing therewith a small quantity of a metallic chloride, preferring solid terchloride of antimony but sesquichloride of iron and terchloride of arsenic also succeed well; and a current of dry chlorine is passed into the mixture until the bisulphide of carbon is decomposed. Bichloride of carbon and chloride of sulphur are amongst the products obtained, and can be separated from the other products and from each other by having two condensers in connection with the retort; the first condenser is kept at a temperature of boiling water or thereabouts, and condenses chloride of sulphur, whilst the second is cooled as far as it can conveniently be, and in it the chloride of carbon condenses, and is afterwards purified by treating it with milk of lime, distilling it from a sand bath, again treating it with lime or alkali, and redistilling it. When using sesquichloride of iron in place of the terchloride of antimony, the apparatus and process are both slightly modified to the above. Bichloride of carbon by this process it is said "becomes available " as an anæsthetic."

[Printed, 4*d*. No Drawings.]

A.D. 1865, December 18.—N° 3268.

PLANCK, HENRY.—" Improvements in apparatus for regulating " heat obtained in the combustion of gas." These are, to a vessel or chamber the temperature of which has to be regulated, fixing a vessel containing mercury, " to which vessel is attached " a tube formed conical at top, into which cone is fitted a plug " having its lower part formed as a diaphragm. To the upper " part of the tube gas pipes are attached at both sides, the passages of the pipes corresponding with the upper part of the " diaphragm. On the application of heat the mercury in the " vessel expands and rises in the tube until it comes in contact " with the lower edge of the diaphragm, and shuts off the supply " of gas, except that which passes through an aperture in the " top of the diaphragm, provided for the purpose of avoiding " the total stoppage of the gas. As the heat is shut off, the " mercury commences to contract, and descends below the bottom " of the diaphragm, thereby forming an opening for the passage " of the gas, the size of this opening being determined by the " temperature of the mercury and vessel in which the regulator " is placed." The delicacy of the instrument " depends upon " the proportion between the capacity of the vessel containing " the mercury and the diameter of the tube in which it rises and " falls, and the addition or substraction of mercury causes a " corresponding increase or decrease in the temperature at which " the regulator acts; or by means of a plug attached to a screw " the position of the mercury in the tube may be regulated, and " the same result obtained as by the increase or decrease of " mercury." This means of regulating heat is particularly applicable "in vulcanizing india-rubber for dentists' use."

[Printed, 8*d*. Drawing.]

1866.

A.D. 1866, January 16.—N° 145.

DUMMERE, Stephen.—(*Provisional protection only.*)—" Improvements in mattresses and palliasses and seating for use in " nurseries and hospitals, and by invalids, and for omnibus or " any other seating exposed to wet by weather or otherwise." These are, " to prevent (in the case of young children and invalids) the inconvenience and injury to health arising from wetting " the couch," and " consists of a recess, made of japanned tin or " other suitable material, let into a portion of the palliasse below " as a receptacle, and immediately above such receptacle a corresponding portion of the mattress is covered with a water-proof " material, distributed over the surface of which are a suitable " number of perforations to convey the liquid at once through the " mattress, which is thus kept perfectly dry. By the use of metal " or other eyelet holes, which indent the surface of the said mattress in the manner of tufts in stuffing soffas or chairs, any " liquid must immediately fall through the eyelet holes into the " pan in the palliasse beneath, and can be removed at pleasure." Further, this plan may be adapted to all seats exposed to wet by weather or otherwise."

[Printed, 4*d*. No Drawings.]

A.D. 1866, January 18.—N° 169.

HIBBERT, William.—" Improvements in the combination of " chemical matters and mechanical apparatus applied therewith " for the prevention or cure of contagious and other diseases to " which human beings and animals are subject." These are, first, " of a compound solution to be used internally as a medicine, " or outwardly as baths, embrocations, or saturated bandages; it " also acts as a disinfectant and preventive agent against infectious " diseases generally." The compound is composed of a solution of chloride of magnesium, bromine, and chloride of zinc in certain proportions; when taken internally it is added in certain quantity to water. For outward application, "as baths or embrocations, " *the* said solution may be applied freely."

Second, "of mechanical apparatus for filtering, purifying, and "disinfecting the poluted air or atmosphere in infected situa-"tions," applicable "to preventing and arresting the progress "of fermentation and decomposition in the blood of human beings "or animals." An auxiliary lung respirator has two or more holes punched in it, "sufficiently large to ensure easy breathing." In these holes are tubes with valves for inhalation and exhalation. There are also various filters through substances saturated with the liquid, and through the liquid itself.

The "general adaptation of the auxiliary lung respirator con-"sists in varying the conformation and material to suit the "comfort and convenience of human beings, the principle of "supply and outlet valves being the same. There is a self-"acting respirator for the nostrils constructed similar to the one "before described, and which may be used either separately or "combined with one for the mouth;" or two separate tubes containing medicated "matters are put in the nostrils for the "same purpose."

[Printed, 10*d*. Drawing.]

A.D. 1866, January 20.—N° 192.

SHILLCOCK, JOSEPH BRADLEY.—"A perforated cage for "leech vases." This "is formed by affixing a number of per-"forated discs one above another, by preference, upon a centre "stem," at the top of which is fixed a "perforated lid with a "clipping flange, which flange is intended to embrace the top of "the vase." The vases, preferred, are of "cylindrical, oval, or "other parallel-sided form; globular or other shaped vases may "also be fitted therewith, the interiors of which by the introduc-"tion of the cages are divided into a series of compartments." The perforated cages may be made of zinc, &c., and the perforations such as to allow the leeches, &c. to pass through them from one compartment to another. "The peripheries of the "discs should be of the same form as the interior of the vases, "and of such dimensions as will allow the leeches or other "aquatic animals to pass freely between the said periphery and "the sides of the vases." "In some cases the edges of the "discs may be corrugated." The edges of the perforations, &c. are rounded. "The object of the cage thus formed is to cause "the leeches or other aquatic animals to pass through the per-

" forations and corrugations, whereby they cleanse themselves, " and are kept kept perfectly clean and healthy."

[Printed, 6*d.* Drawing.]

A.D. 1866, February 3.—N° 339.

HIBBERT, William. — (*Provisional protection only.*) —" An " improved mechanical valve respirator." This is made of strong leather, &c., " and of any suitable conformation to suit " animals or human beings. In the pad for the nose or mouth " are punched two holes sufficiently large to ensure easy breathing." There are two valves with spreading flanges for fastening in between the folds of leather, &c. round the breathing holes, and with coupling worm or screw for attaching tubing of any required length. " One of the valve cocks is hinged to open " inwards towards the mouth, the other to open outwards from " the mouth." " Leather or india-rubber tubes are coupled to " the supply and outlet valves, the supply tube being attached " to the reserve chamber of medicated and disinfected atmo- " spheric air." Or the tubes are lengthened, and disinfecting filters are inserted in them. As a disinfectant for filtering and purifying the air, using " chloride of magnesium, bromine, and " chloride of zinc, either separately or in combination hot or " cold;" if used in combination, the proportions in which the substances above named are employed are given. This solution is impregnated into bandages, and is used in baths, &c. " If " small doses of chloride of magnesium and bromine were occa- " sionally given to healthy animals, it would lessen the violence " of an attack of rinderpest or other contagious disease, if not " throw off the influence altogether."

[Printed, 4*d.* No Drawings.]

A.D. 1866, February 8.—N° 383.

BOBŒUF, Pierre Alexis Francisse.—(*Provisional protection only.*)—" Improvements in the manufacture of artificial coal " tars and their solid derivities, such as phenical soaps and " salts." These are, in reference to this subject, as follows :— Take a quantity of penic acid, dissolve it in caustic soda or potash, and mix this solution with several cakes of soap " in " the proportion of one thousandth part to fifty per cent., " according to the nature of the soap desired to be produced.

These soaps "being very soluble in water produce aqueous solu-"tions for disinfecting vessels, stables, and similar purposes, for "washing animals, or for curing them of spizoatic or other "epidemic maladies. The ordinary phenical solutions of soda "or potash produce the same effect." "In the manufacture of "phenical salts (sels phéniques)" mixing penic acid or the soluble phenical alkalies in water with crystallized salts, neutral and soluble carbonates and sulphates. When these substances "cannot be easily and uniformly mixed with the salts, they may "be amalgamated with soluble substances which are sticky or "clammy, such as treacle, gum, flour, paste, starch, glue, and "other similar substances with which they mix well, at the same "time adding more or less caustic soda." "These amalgams "can be made very concentrated, being at the same time very "soluble in water, and may be employed for the same purposes "on board ships, in farms, and other places." "Under the "head of phenic acid of commerce" is designated the re-union of the essential mineral and vegetable oils of schist, wood, bog-head, turf, and the like, which like penic acid are "soluble in "caustic alkalies, and which, like it, are disinfectants, anti-"miasmatic and insecticidal."

[Printed, 4*d*. No Drawings.]

A.D. 1866, February 10.—N° 414.

JUNOD, VICTOR THEODORE. — "Improvements in vacuum "apparatus employed for the cure or relief of inflammatory "diseases." These are, first, "connecting a series of vacuum "cups or chambers by means of a flexible air tube," for "ap-"plication to the back or other part." "The whole series being "exhausted by means of one air pump."

Second, "forming vacuum apparatus for the arm at such an "acute angle that painful pressure upon the point of the elbow "is prevented, the instrument so formed affording support to "the arm around the elbow without giving pain to the patient." There is a joint at the elbow.

Third, employing "a 'muff' or sleeve of silk or other woven "fabric as a lining introduced within a sleeve of comparatively "thin and soft india-rubber;" or the india-rubber may be protected from bursting inwards by a collar of metal in some cases capable of expanding. Also applying "a ring or collar to the

" mouth or top of the apparatus so as to adapt the instrument " to legs (arms or part of these) of large or small circumference " without inconvenience to the patient."

Fourth, " forming vacuum apparatus for the leg or arm in " several parts or sections " to " be packed within each other so " as to occupy but little space."

Fifth, " forming abdominal vacuum apparatus with several " internal chambers communicating with each other."

Sixth, adapting vacuum apparatus of this character to the neck " in the form of a collar combined with a hook of india-" rubber to prevent the entrance of air, and so as to leave the " face of the patient exposed."

Seventh, " applying an improved vacuum guage " to the air pump employed as above.

Eighth, " arranging vacuum apparatus so that a number of " patients may be treated simultaneously."

A number of instruments are connected by flexible tubes controlled by stop cocks.

[Printed, 8*d*. Drawing.]

A.D. 1866, February 16.—N° 500.

WOOD, William, and WOOD, James William.—" Improve-" ments in the manufacture of pomfret or liquorice cakes, rolls, " and pipes, and of lozenges and other similar articles of con-" fectionery, and in apparatus to be used in the manufacture " of such articles." These are, first, manufacturing the above articles by " forming them by repeated or accumulated films, " layers, or laminæ of liquid or pasty material on prepared " surfaces, dies, and cores of metal or other suitable material." When practicable, the surfaces are, in preference, made of glass or other vitreous material. The above materials are likewise made by dusting on the thin films of liquorice material " pow-" dered white or colored sugar or other material, then drying, " and repeating the operations alternately, until the desired " thickness is obtained."

Second, using in the above manufacture " roasted or baked " grain, flour, or farinaceous matters " " in lieu of preparing the " flour or farinaceous matters by boiling."

Third, using " a cylinder or endless sheet of copper or other " suitable material, which being slowly rotated in an enclosed

" space and in contact with feed rollers or a short endless sheet " revolving in a trough or cistern, a thin film of the liquid or " pasty material is continuously spread on its surface, which " film or layer is continuously dried by a current of air passed " over its surface and through the enclosed space in which it is " moved." Endless chains, &c. may carry suspended sheets, plates, dies, rods, or cores, which are dipped in the liquid material as above. The sheets, &c. of materials thus produced are cut, &c. into the articles required. Plain or figured dies may be fixed on the cylinders, and may be manipulated as above. A thin film of oily, fatty, or other substance, or of flour paste dried is laid on the surface of the die, plate, core, &c. previous to the application of the liquorice to prevent the adhering of the article to the surface.

[Printed, 1*s*. Drawing.]

A.D. 1866, February 20.—N° 522.

HILL, George, and HILL, David. — " Improvements in " trusses." These are, attaching to the band of web, leather, or " other material which encircles the waist, two, three, or more " elastic metal bands jointed together so that they can yield to " the ever changing and unequal motions of the body of the " wearer," and to the central metal band is fixed a thin metal plate to which is attached a pad or pads by means of lock joints formed as follows :—To the top of each pad is attached a disc having a number of grooves or notches, and the disc is jointed to " a small frame held by a screw to the aforesaid thin metal " plate, but before being definitively fixed the bottom of the " plate is entered into one or other of the grooves or notches in " the disc according to the pressure required to be exerted." In some cases dispensing with the additional metal plate, and attaching the pads to the central metal band, and also, instead of grooves or notches in the disc in the top of the pad, forming " teeth gearing into a worm working in the small frame, so that " the pressure of the pad can be altered without removing it from " the band."

[Printed, 10*d*. Drawing.]

A.D. 1866, March 3.—N° 642.

LARNAUDÈS, Victor.—" A new or improved chemical mixture " to be used as a disinfecting and preserving fluid for the cure of

" disease among cattle, and for other purposes." This consists of " natural water 100 lbs., sulphate of zinc 26½ lbs., sulphate of " copper 8 ounces." " The object of this invention is to purify " all places infected with impure air, to arrest the progress of and " cure disease of fever and other like maladies among cattle, for " purifying gas and affording a vastly superior light, for embalming and for cleansing or purifying localities such as manure " factories, tan pits, slaughter-houses, cesspools, urinals, hospitals, " dissecting rooms, sick rooms, and all other places where impure " and unhealthy air exists." The fluid is sprinkled, &c. over or brought in contact with the substance to be purified or disinfected.

[Printed, 4*d*. No Drawings.]

A.D. 1866, March 27.—N° 890.

SALOM, Henry Salom.—" Improvements in the construction " of goggles to be used for the cure of 'strabismus,' or squint, " which said improvements are also applicable to the stages of " microscopes." These are, fixing " in the eye frame of the " goggle a plate, preferably of metal, having in it a central " aperture or hole. This plate occupies the position and is " similarly fixed and placed as that of the glass in ordinary " spectacles. On its outer surface is another parallel plate " having also an orifice in its centre, but much smaller than " that in the first-mentioned one, and attached in such a way " that it can be moved in any direction in a plane parallel to the " fixed plate." This motion is effected by means of a pair of screws placed at right angles to each other, so that the position of the aperture of the outer plate can be varied. " Through this " aperture the rays of light pass to the pupil of the eye, and by " varying the position of the aperture to the right or left, up or " down, the eye gradually adapts itself to a similar position. " When the proper position of the aperture is obtained it may " be rigidly fixed if necessary by means of a clamping screw."

[Printed, 6*d*. Drawing.]

A.D. 1866, March 27.—N° 899.

COOPER, William Temple.—(*Provisional protection only.*)— " Improvements in the treatment for the cure of the venereal " disease in the male sex." These are, employing " a wick or " core of silk, cotton, or other material, with a loop at one end,

" the wick being embedded in butter of cocoa, in manner of a " dipped candle, but which is of small diameter, say, from an " eighth to a quarter of an inch, and four or five inches in " length. The butter of cocoa is previously mixed with tannin " or sulphate of alum, or other astringent, as also with a prepa- " ration of opium or any other sedative; these may be either " applied in combination or separately. The small cylinder of " unctuous material is introduced into the urethra, and allowed " to remain there till dissolved and absorbed or passed away. " The loop of the wick having a string threaded through it (and " fastened in any suitable way) is afterwards drawn out." The thread may be dispensed with, and "instead of butter of cocoa, " wax and tallow or lard may be employed, or even wax tallow " and spermacetti."

[Printed, 4*d*. No Drawings.]

A.D. 1866, March 28.—N° 906.

FOVEAUX, Henry Joseph Francis Hubert. — (*Provisional protection only.*) — " An improved apparatus for injecting liquids " and applying liquids externally." This " consists of two " boards or plates hinged together at one end and of a water- " proof bag, by preference of a wedge shape, fitted between the " boards near the hinges. A tube is carried from the bag " through openings in the boards or otherwise, and terminates " in a funnel, by which the bag is filled with liquid; the tube is " also furnished with a cock." The apparatus is employed as follows :—After the bag has been filled with the liquid, the cock is closed, and an injecting pipe or tube is attached to the funnel. The patient then sits upon the upper board, and the liquid is forced through the pipe to the rectum or other part required. The lower board may be placed upon a bidet or upon the seat of a watercloset.

[Printed, 4*d*. No Drawings.]

A.D. 1866, March 31.—N° 922.

DAVIS, James.—" Improvements in obtaining caustic alkalies " to be used as disinfectants, deoxedizers, decarbonizers, and the " means by which the same are to be applied, as also for applying " the gases liberated in the process to the conversion of iron into " steel, and for the manufacture of manures." These are, in reference to this subject, "the exclusive right to use caustic " alkalies for disinfecting atmospherical air, and of preventing " smells from decomposing substances of all kinds." Also " the production of cradles for distributing the alkalies with or " without charcoal in mines and other places," as follows:—The purest limestones or magnesian limestones are selected and fired, in preference in "the ordinary running kiln," the lime shells are drawn from the bottom of the kiln, when cool and moistened with a solution of potash, about seven pounds pearl ashes to ten gallons of water to a ton of shell lime, the shells are then put into retorts similar to gas retorts, and finally burned until " absolutely caustic." These "alkalies" are used "either alone " or in conjunction with charcoal or any of its carbonaceous " eliminations as a disinfectant." " For this purpose the alkalie " or alkalies mixed with water in any proportions may be used" " with or without charcoal, &c., may be washed over the walls and ceilings of rooms, &c., &c.; also for dipping of sheep, dogs, and other animals; or it may be introduced in sewers, cesspools, &c., &c.; "or on or among decomposing and decom- " posable substances of all kinds. "As a disinfectant in mines " and other subterranean places" the disinfectants are put loosely in what may be called cradles, which are made of wicker, wire, iron, or wood. The potash salt above may or may not be used with the lime.

[Printed, 4*d*. No Drawings.]

A.D. 1866, April 3.—N° 944.

SCHWEITZER, JULIUS.—(*Provisional protection only.*)—" Im- " provements in the manufacture of pancreatic emulsions of " solid and liquid fats and oils." These are, obtaining such emulsions in "a more perfect and efficacious condition for medi- " cinal uses" than hitherto, as follows:—"The pancreas of " various animals may be used, but that of the pig will be found " especially adapted," are "first bruised, and then mixed with " the solid or liquid fats or oils, the whole being stirred, and the " emulsification assisted by the addition of water. The emulsion " is afterwards separated from the pancreatic tissue by straining, " and brandy or other spirit, oil of cloves, or other essences or " essential oils may be added for the double purpose of preserv- " *ing* and flavouring the emulsion. The emulsified fat may also

" be extracted by means of ether, chloroform, or alcohol, or by " heat, or by any other solvent for fatty matters. The etherial, " alcoholic, or chloroformic solution when filtered and evaporated leaves the fatty matter in a perfectly dry state, in which " it is readily miscible with water."

[Printed, 4*d*. No Drawings.]

A.D. 1866, April 14.—Nº 1060. (* *)

BONNEVILLE, Henri Adrien.—(*A communication from Sophie Dambrine Widow Polydore Massiou.*)—(*Provisional protection only.*)—" Improvements in beds for invalids and other sick " and infirm persons." The "bed is provided with a frame carry- " ing a sheet on which the person is placed;" the frame is raised or lowered by a rack and winch or other method; the sheet is made in several pieces laced or tacked together, "so that one or more " may be removed in order to dress any injured or diseased part " without disturbing the patient;" it is also connected with a funnel or basin communicating with a close stool " placed " beneath the bed, and covered with a sliding flap." The patient can " by any suitable means" pump water into the basin after using it. The mattresses " are replaced by a number of bolsters " or small circular cushions on rods passing from side to side of " the bed."

[Printed, 4*d*. No Drawings.]

A.D. 1866, April 17.—Nº 1080.

KING, Charles Joseph Berry.—" A new unfermented be- " verage." This beverage, it is said, is " to be taken medicinally " or otherwise," and " possesses all the qualities of wine without " having any alcoholic or intoxicating influences." In the Provisional Specification it is said to consist " in the union of glycerine " with the phosphoric acid and permanganate of potash in about " the following proportions, viz., one to two drams of glycerine, " one and a half to two drams of phosphoric acid, two drams of " permanganate of potash, and one pint of water, to which may " be added essence of lemon, tincture of capsicum, extract of tea, " or any other flavouring matter." In the final specification sugar is sometimes added, and likewise the beverage is sometimes " impregnated with " carbonic acid or fixed air."

[Printed, 4*d*. No Drawings.]

A.D. 1866, April 25.—N° 1166. (* *)

BUTCHER, Henry Charles.—"An apparatus to be used for "piercing and holding cigars, and as a tobacco-stopper, pencil-"case, whistle, seal, tooth-pick, or watch-key." This apparatus "is usually composed of four parts," namely, an outer tube, an inner sliding tube, a helical spring, and a piercer. The lower end of the outer tube is formed into (or has attached to it) a ring which serves as a cigar holder, and the ring carries "a bottom "piece which forms a tobacco stopper."

The upper end of the sliding tube may unscrew and carry a tooth-pick, watch key, or other article. The lower end of the ring may have attached to it a tube to hold a pencil or a pen; or it may be connected to a penknife, &c.

[Printed, 8*d*. Drawing.]

A.D. 1866, May 4.—N° 1274.

HOPE, John Graham.—"An improved composition for de-"stroying vermin on sheep and other animals, and for preserving "them therefrom." This consists as follows:—"Some of the "brown grease obtained from the refuse of woollen manufactures, "is melted in a suitable vessel, after which some gallipoli oil, fish "oil, and some light pitch oil are successively introduced, some "naphthaline is now added," and the whole heated up to about 212° F., "after which an alkali of 10° Twaddle is either added to "the mixture in the vessel, or the mixture itself may be run into "a vessel containing the alkali." When "thoroughly com-"mingled the compound is allowed to cool," and "may be "applied either as a smear, or being dissolved in water as a dip." The proportions preferred are, "1 part brown grease;" "1½ parts "of gallipoli oil; 1½ parts of fish oil; 2 parts of light pitch oil; "1 part of naphthaline; and 1 part of alkali." To form a more effective composition the following proportions are employed, viz.:—"2 parts of brown grease; 2 parts of light pitch oil; 1 "part of gallipoli oil or 'foots' oil; 1 part of fish oil or 'foots' "oil. These ingredients are heated together, after which are "added 1 part of naphthaline and one part of alkali." The compound may be also used as a disinfectant, for which purpose, it is said, it is thoroughly adapted, and it is for this reason that the invention is included in the present series of Abridgments. "In "*lieu of* using light pitch oil alone, a mixture consisting of one-

" half of pitch oil, and the other half of shale or gum oil may " be substituted, or in some cases, shale or gum oil may be " employed entirely in substitution for the light pitch oil." The alkali preferred is " one half of soda, the other half of potash."

[Printed, 4*d*. No Drawings.]

A.D. 1866, May 7.—Nº 1294.

DE TIVOLI, Vital.—(*A communication from Major-General Angelini.*)—(*Provisional protection not allowed.*)—" New form or " partial or total baths for man or animals." This consists " in " manufacturing with materials impervious to air and water, such " as cloth prepared with tar, india-rubber, or other fit substance, " a bag or bags into which a limb or limbs or the whole body may " be introduced, and then any required quantity of hot water, or " any other liquid, either simple or medicated, as the case may " be. The bags should be differently shaped according to the " different part or body for which they are intended."

[Printed, 4*d*. No Drawings.]

A.D. 1866, May 7.—Nº 1295.

DE TIVOLI, Vital—(*A communication from Major-General Angelini.*)—(*Provisional protection not allowed.*)—" A new system " of application of pads of india-rubber or other elastic materials." This consists " in manufacturing with said elastic " materials pads in the form of one or more tubes, or of thick " sponge, or of any other form, and adapt them to the body of " men or animals, or to the various parts of the same to relieve " them from the effects of painful or injurious contacts, shock, " or pressure." The application of these pads to a number of purposes is named, and, in reference to this subject, it is said, that " when applied to crutches, artificial legs, and other surgical " apparatus they will relieve the most sensitive points from the " pain caused by pressure."

[Printed, 4*d*. No Drawings.]

A.D. 1866, May 8.—Nº 1319.

CRAWFORD, Joshua—(*Provisional protection not allowed.*)— " Improvements in abdominal supporters." This " consists of a " belt or zone composed of girth, web, cloth, or other elastic " material five inches wide in front and two inches wide behind, " and is supported by two braces or suspenders which pass over

" the shoulders and cross behind, and are fastened to the belt or " zone before and behind with buttons like ordinary suspenders. " Or the belt or zone may be supported by shoulder braces which " pass around each shoulder, and instead of crossing behind they " are connected by two elastic straps, the upper one across the " shoulder blades, and the lower one at the small of the back; " these braces as the others, are fastened to the belt or zone by " buttons as ordinary suspenders in front. Two narrow straps " are attached to the lower edge of the belt or zone; these are " passed around the thighs, and are fastened at the other end to " the belt or zone near the groin: to each of these narrow straps " is attached another similar strap, which is attached at the other " end to the body of the belt or zone at or near the hip bone; " buckles are provided at proper points to adjust the belt or zone " and the thigh straps to the size of the person."

[Printed, 4*d*. No Drawings.]

A.D. 1866, May 18.—N° 1409.

MORAND, Peter Joseph.—" Improvements in infants' feeding " bottles." These are, " the application to the teats of infants' " feeding bottles of flexible or yielding curved surfaces, whether " of a spherical, semi-spherical, or other curved shape, or of " whatever material," as follows:—The bottle is seated on the table on its side, it has a turned up neck, so that " the liquid " cannot escape unless drawn out, nor the bottle be toppled " over." Near one end of a flexible tube is fixed " a flexible " capsule, which is placed on the neck of the bottle," and to the other end of the tube is connected " a flexible ball or sphere, and " teat united permanently " together, or they are made of separate pieces and held together by flanges or studs. Or instead of the flexible ball there is attached or fixed " to the teat a flexible " semi-spherical or other curved surface, the object in all cases " being to obtain a curved flexible or yielding surface resembling " the human breast in softness, and at the same time to prevent " the teat being swallowed."

[Printed, 10*d*. Drawings.]

A.D. 1866, May 18.—N° 1412.

FOX, Joseph Wesley.—(*A communication from William Trivet Fox.*)—(*Provisional protection only.*)—" An improved apparatus " for containing and dispensing or scattering liquid scents and "other liquids." This consists of a vessel or bottle, the stopper of which "is formed with two channels open at both ends. A tubular passage is fixed or formed in the bottle or vessel, having openings at or near the top and bottom. The upper passage in the stopper leads through from one part of it to another, and the lower passage opens into the upper at one end, and into the side or bottom of the stopper at the other end in such position that, when the stopper is turned in the neck of the vessel the bottom end of such passage may be brought opposite to or over against the opening of the tubular passage in the vessel, so that a thoroughfare or communication may be formed between the two passages. By blowing through the upper passage in the stopper, the scent or liquid will be drawn up from the vessel and blown out through the stopper. The stopper may be turned to bring its blank surface against the top of the tube in the vessel and close communication. I sometimes form an air hole in the neck or upper part of the vessel, and the stopper is (in that case) cut away or recessed at one part; the air hole is opened by bringing this part opposite it, and it is closed by turning the stopper so as to bring the blank part against it."

[Printed, 4*d*. No Drawings.]

A.D. 1866, May 23.—N° 1446.

LEWENBERG, JOSEPH.—(*A communication from Clara Lewenberg.*)—(*Provisional protection only.*)—"An improved composition for beautifying the complexion." This, it is stated, "is distinguished for its extremely bland, purifying, harmless, and soothing effects upon the skin, and by acting upon the pores and minute secretory vessels; it expels all impurities from the surface, and effectually dissipates all redness, pimples, spots, blotches, and such like imperfections of the skin." It is composed as follows:—"Pulverized egg shells, 1 pound; calcined magnesia, 2 oz.; terra alba, 1 pound; marsh mellon (mallow?) root, 1 pound; oris root, 1 pound; gum benzoin, ½ oz.; rose water, 1 pint; otto of rose, 5 drops; cascarella root, ¼ oz." The quantities herein given "may in some cases be varied."

[Printed, 4*d*. No Drawings.]

A.D. 1866, June 4.—N° 1546.

ROGERS, MAURICE COHEN.—(*A communication from Moss Jones.*)—"Improvements in the method of and apparatus for

" fitting artificial teeth and retaining them in position." These are first, "for sticking up the plates to the exact form of the " mouth, in order to retain the teeth in position a plaster model " is first taken as usual, and two holes are drilled in the back of " it in which screws with conical heads, as long as their shanks, " are inserted loosely, so that when the mould is taken they " remain in it, and when the metal is poured in for the casting, " they are embedded or screwed into it, and they are withdrawn " thence and ordinary screws inserted; the die or counter is then " obtained and the pattern taken, holes being made therein to " correspond with the screw holes, and then the plate is cut out " and screwed to the cast, whereby it is prevented from shifting, " and it is then hammered between cast and die."

Second, "fitting artificial teeth or producing fitting surfaces " thereon," as follows:—" A mould or cast of the teeth intended to be used is made, and from this mould or cast teeth. " in plaster, sulphur, resinous clay, or other soft plastic substances " are cast or produced; these are fitted and they are then " replaced in the mould or cast which is cut down to the height " of the soft teeth; the soft teeth are then taken from the mould " or cast, and the teeth intended to be used are introduced therein " and ground or cut down to the proper height; which is indicated by the edges of the mould. To render the fitting more " exact, a fitting surface produced in like manner is brought to " bear on the teeth, and show when these still require to be " ground if needful." The apparatus required is fully described.

[Printed, 1*s*. Drawing.]

A.D. 1866, June 22.—N° 1662.

GODFREY, Thomas.—" Improvements in artificial teeth." These are first, "to increase the strength and diminish the weight " of the body of artificial teeth," forming "the base of artificial " teeth of ebonite or vulcanite," and fixing a thin stratum of gold on the upper surface with a sub-stratum of alluminium between it and the vulcanite base.

Second, increasing " the adhesive or holding power of the base " or artificial to the natural plate," by forming " a hollow chamber, cavity, or recess of any desired shape in the under surface " of the base, or that portion of the artificial base which is fitted " to the plate," and completely round this cavity, forming " a " *raised rib* or head, so that when placed in the mouth the suction

" from the roof causes a vacuum in the cavity, and the teeth " thereby held more firmly and securely to the palate than when " the cavity is formed in the ordinary manner."

[Printed 4d. No Drawings.]

A.D. 1866, July 2.—N° 1753.

BONNEVILLE, Henri Adrien.—(*A communication from Emile Duroux.*)—(*Provisional protection only.*)—" Improvements in ap- " paratus for applying heat to certain parts of the human body." These are, having " a cylinder which may be made of tin, copper, " or brass," of " suitable form and dimensions, for receiving the " legs and feet, which are to be introduced from the upper part. " Its lower end is provided with a receptacle for boiling or hot " water, on which the feet are placed. The upper end is then " hermetically closed by a blanket surrounding the legs, and " thus the heat developed by the hot water combining with the " natural warmth of the body may be kept up for any length of " time required."

[Printed, 4d. No Drawings.]

A.D. 1866, July 3.—N° 1763.

SHERATON, George Robert.—" A new or improved instru- " ment to be used in cases of difficult parturition." This consists " of two blades of flexible steel curved in a somewhat " sigmoid form," " united at one extremity by a moveable linked " joint, and at their other extremities are fitted into the rotary " bars, which allows each blade to rotate in opposite directions to " the extent of 90°, forming a hoop," or the blades are placed parallel to each other. " The power of rotation is obtained by " pressing upon the transverse bars or 'lugs' of the rotary bars," which rotates upon the handle by which the requisite angle is obtained. The degrees of rotation is limited by stops or pins in the handle, and by the forms of the linked joint and rotary bar. " The handle is flattened on one side to enable the operator to " determine with accuracy the degree of angle obtained, and its " relative position with respect to the fœtal head and maternal " passages."

[Printed, 1s. 6d. Drawings.]

A.D. 1866, July 27.—N° 1950.

MATHIEU, Alexis Victor.—" An improved apparatus for " irrigating the intestines, the vagina, the bladder, the brain, the

" eyes, and eyelids." This consists of "a metal box provided " with a receiver intended to hold the liquid and the mechanism " serving to project this liquid. This mechanism consists of a " pump worked by a vertical lever, a projection tube, and a " discharge tube; the liquid passes by the first to effect the " irrigation, and issues by the second; these two holes are each " provided with a screw ring, the inner thread of which is intended " to fit on the screw thread of the corresponding joint of the " various small apparatus, by the aid of which different irrigations " are effected."

" Great intestinal irrigation." "A vase containing the liquid " is placed above the apparatus, and a syphon conducts the liquid " into the reservoir, where its arrival is regulated by a stop-cock." The " canular or clyster pipe being introduced," the pump is set to work, the liquid distends the intestines, " then the canula retakes " it, and the discharge pipe, which follows the latter, deposits the " liquid in a vase placed on the floor."

" Vaginal irrigation " " is effected in the same manner as the " preceding, the canula alone being changed."

" Vesical irrigation:—The probe being introduced into the " bladder, is fitted to the projection and discharge pipes of the " apparatus."

" Cerebal irrigation. The hair having been shaved off, an india- " rubber cap is pulled over the head down to the eyebrows, an " elastic band firmly fixing its border around the head. The " projection and discharge tubes of the cap, furnished with their " joints, are secured to the screw rings of the corresponding parts " of the apparatus."

" Oculo-palpebral irrigation (eye irrigation)." Here the ordinary tubes of the apparatus are replaced by two small projection and discharge tubes, which are connected with an occular basin or cup. " Wire gauze fitted to the screw ring of the projection " pipe prevents any dirt getting to the eye."

[Printed, 1*s*. 4*d*. Drawings.]

A.D. 1866, July 31.—N° 1966.

PARAF, ALFRED.—(*A communication from Paul Schutzenberger.*) —(*Provisional protection only.*)—" The application to medicine, " for beverages and for industrial purposes, of a new gaseous " water." This is made by decomposing " pure nitrate of am- " monia," and letting the gas, " protoxide of nitrogen, commonly

" called 'laughing gas,'" pass " through caustic soda and sul-" phate of iron," and then into " one of the apparatus used for " the soda water manufacture, the gas is compressed into the " water at a pressure of 1 to 8 atmospheres, according to the " strength required, and with 4 atmospheres a very gaseous " water is formed and of a sweet taste." By drinking this water " the protoxides of nitrogen goes into the blood by way of intes-" tinal absorption, and thereby produces a more active combus-" tion, and prevents a normal formation of uric acid, and in cases of " gout, gravelle-uric, and similar diseases " " immediate and reme-" diable results " have been obtained. Also combining " pure " protoxide of nitrogen with other matters," and thus obtaining " several advantages ;" first, combining " water with protoxide " of nitrogen with carbonic acid ;" second, making " an alkaline " protoxide of nitrogen water containing 1 per cent. of bicarbonate " of soda ;" and third, making " a lithinated water composed of " 10 grains of carbonate of lithine, 40 grains of bicarbonate of " soda, and 10 quarts or thereabouts of protoxide of nitrogen " water, and the protoxide of nitrogen water can be applied " industrially as an oxydating agent."

[Printed, 4*d*. No Drawings.]

A.D. 1866, September 28.—N° 2512.

WOOD, WILLIAM, and WOOD, JAMES WILLIAM.—(*Provisional protection only.*)—" Improvements in the manufacture " of lozenges, and of pomfret or liquorice cakes, and other " similar articles of confectionary, and in apparatus for the " same." These are, first, the materials made into a solid block are " cut into slices or sheets by one or more knives or cutters, " to which, by preference, a quick sawing motion is given." In forming lozenges from sheets, first, using a metal plate with perforations, the size and form of the lozenges required; second, a plate or frame with punches corresponding with the perforations in the first plate. A sheet of paste or mixture is placed over the perforated plate, which is laid on a plain or figured table, and the lozenges punched out, &c.

Second, forming certain patterns or ornaments in the rims of lozenges by pressing the lozenges into a perforated plate, the circumference of the perforations being figured; they also may be oblique or inclined.

Third, the manufacture of pomfret or liquorice cakes is the same as first above described, except, using a fine steel wire or wires wherewith to cut the block of paste into sheets or slices.

Fourth, "forming the figure or pattern on, and the shape of " pomfret or liquorice cakes, and of lozenges and other similar " articles," by pressing sheets of the material between one or more engraved or figured plates. The figured sheet is then cut into cakes, and dried, &c.

Fifth, varnishing or glazing sheets of liquorice, and mixing when desired colouring matter in the varnish or glaze.

Sixth, printing patterns or figures on pomfret or liquorice cakes by blocks, stamps, stencil plates, and "printing thereon adhesive " matter, and then dusting on it whilst wet, white or coloured " powdery material."

[Printed, 4*d*. No Drawings.]

A.D. 1866, October 3.—N° 2536.

BROOMAN, CLINTON EDGCUMBE.—(*A communication from Martin Ziegler.*)—" The production and application of an impon- " derable fluid, together with the apparatus or means employed " therein." This fluid, it is said, is made " by putting in contact " azote and carbon, whether an azoted body and a carbonated, " or a body strongly azoted, and a body only feebly azoted, or by " causing an acid or an alkali to act on an organic matter, or by " making an acid or an alkali re-act on a hydrocarburet or car- " bon." The apparatus consists as follows :—" A porous vessel " or bladder is filled with caustic ammonia and immersed up to " the neck in molasses contained in an ordinary vessel; a silk " thread is attached to the neck of the porous vessel or bladder, " and the end of a second silk thread is placed in the molasses, " the two ends of the silk threads being connected the circuit is " closed, and the current of vital fluid passes; its effect will " become manifested on an organised being in the line of current. " If a certain number of these elements are gathered together in " couples, a dozen for example, by plunging the thread from the " ammonia of the first element, into the molasses of the follow- " ing element, and so on, or by connecting on the one side all " the threads from the ammonia, and on the other all those " from the molasses, a powerful current will be obtained, which " produces on an animated being very considerable effects," Other arrangements of apparatus, said to give similar results, are described.

[Printed, 4*d*. No Drawings.]

A.D. 1866, October 11.—Nº 2631.

BOLLANS, Robert Henry.—(*Provisional protection only.*)—"Improved apparatus for administering vapour baths and "fomentations." This consists of "a gauze, or it may be a "glazed lantern fitted with a removable spirit lamp, having any "given number of burners, say, three or four, which burners "surround the pointed termination of an inverted conical boiler. "This boiler is supported by the frame of the lantern, and it is "provided at top with a steam supply pipe, and with a self-acting "ball escape for regulating the pressure of the steam within the "boiler." For medicating the steam it is passed through a box, in which are the medicinal substances supported on a gauze or other porous diaphragm. "A flexible tube fitted to a pipe in the "top or lid of the box, and terminating in a dish-shaped vessel "conducts the steam to the patient." To administer fomentations, at the end of the flexible tube is "a dish-shaped metal "shield of any desired form to suit the part to be subjected to "fomentation, and to the dish is affixed a wire gauze cover. "Steam is admitted to the space between the shield and the "cover, and the shield being inserted in a flannel bag, or swathed "in flannel, will transmit heat and moisture thereto."

[Printed, 4*d*. No Drawings.]

A.D. 1866, October 19.—Nº 2707.

SIMPSON, Edwin Lindsey.—"An improved process for the "preparation of india-rubber and kindred gums." These are preparing india-rubber, &c., for dental purposes, by combining it with the vulcanizing compound prepared by boiling linseed or other vegetable oil to the consistence of honey, and to each quart of the boiled oil adding one pound of prepared sulpher (prepared by mixing two ounces of gum benzoin with one pound of powdered sulpher) as follows:—"To one pound of india-rubber or gutta "percha add ten to fourteen ounces of the above-described compound, thoroughly mix the compound and rubber by grinding "between rolls." To produce the requisite color, "add chrome "red or lake pink, in quantities to produce the requisite color, "and when thoroughly mixed it will be in a plastic state and

" in this state rolled into thin sheets and ready for the dentists' " use. The dentist forms the plate in the ordinary manner for " rubber," and subjects the plate to a " temperature of 320° F. " for about four hours, or proportionately less time as the " degree of heat is greater, otherwise treat as ordinary rubber; " and the plate thus prepared will be as tasteless and odorless as " metal plate, and will not tarnish the fillings or other gold in " the mouth of the wearer."

[Printed, 4*d.* No Drawings.]

A.D. 1866, October 27.—N° 2782.

TIFFIN, Charles, junior.—" Improvements in the construction " of perambulators and other similar carriages." These are, reducing the number of joints and pieces, and simplifying the form and reducing the cost of perambulators and carriages for infants and invalids, by constructing them with four main pieces forming the side frames, each pair being jointed or hinged together, and the side frame is composed " of two main pieces " pivoted or hinged together," and " secured in their proper " position whilst the carriage is in use, by means of a stretcher " bar, arm piece, or rest," " such side pieces being attached to or " mounted on the wheel axles," the " side frames are fixed and " maintained at their proper distance from each other " by the length or width of the seat. To the lower end of each of the two longer side pieces, a piece is fitted for receiving the axle of the fore wheel or wheels whilst at the upper end a hand rail or stretcher is introduced for the purpose of propelling the carriage. " Between the side pieces and at about the centre of their length " the seat body is fitted securely, and arm pieces are hinged at " a convenient height above the seat; these arm pieces, stretcher " bars, or extension pieces keep the jointed cross pieces forming " the side frames properly expanded. A single or double hinged " footboard is also mounted between the side frames in such " a manner that it may be folded or closed for the purpose of " further economizing space when the perambulator is folded. " The upper end of each short cross piece forming part of the " frame is received into the outer end of the arm piece or rest." At " the lower end of the same piece a scroll or spring is secured, " and by this means a connection is effected with the axle of " the hind wheels." The carriage when folded or doubled up stands upon a space the diameter and distance apart of the two larger wheels, or slightly in excess thereof.

[Printed, 8*d*. Drawing.]

A.D. 1866, October 27.—N° 2783.

BLACKMAN, John, and BLACKMAN, Edward. — (*Provisional protection only*.)—" Improvements in medicine for the " cure of hooping and other coughs." These are as follows:— " Take, say one pint of beer (by preference), and mix with it " about one pound of saccharine matter, white sugar candy, by " preference, adding about one quarter of a pint of water, in " which a little coltsfoot has been previously decocted. The " whole is submitted to a slow evaporating or boiling process, " together with half an ounce of thyme, which is continued until " the quality is reduced to about one-half; a little vinegar is now " added, and the solution strained to separate the thyme or other " herbaceous substance that may be contained, when it may be " bottled and stored for use. This medicine is administered in " doses of, say, from a tea-spoonful to a table-spoonful, according " to age, and at such intervals as may be found most beneficial."

[Printed, 4*d*. No Drawings.]

A.D. 1866, November 3.—N° 2854.

Mc TAGGART, Robert, and HOLDFORTH, Joseph.—" An " improved pill-making machine." This consists as follows:— On convenient side frames mounting " a pair of rollers with " longitudinal grooves extending from frame to frame, and of " the diameter of, say, one inch and three-quarters, more or less;" within the same framework, are also " a larger pair of rollers, " these latter having their grooves at right angles to the before- " mentioned ones, both the two sets of rollers being actuated by " winches with ordinary pinion gear (the two sets having no con- " nection with each other)." " The operation is as follows:— " The 'mass' is supplied to the longitudinally fluted rollers, and " by them cut into rolls; after that it is passed through the other " set of rollers, being laid transversely on the same, and there " cut and formed into pills the required size, the width and depth " of the grooves necessarily determining the size of the pills, " which on passing through the second or latter set of rollers are

" allowed to drop upon a receiving sieve placed in connection " with a receiving drawer in the lower part of the machine."

[Printed, 6*d*. Drawing.]

A.D. 1866, November 7.—Nº 2886.

DARLOW, WILLIAM, and SEYMOUR, PHILIP WILLIAM.—" A new magnetic compound applicable to the manufacture of " articles suitable for curative and other beneficial and useful " purposes." This consists as follows:—When a flexible compound is required india-rubber, gutta percha, or their compounds are reduced to a pasty or fluid consistency, and mixed with steel filings or other magnetic element and "rolled into sheets or " moulded into any required shape, and, if required, then " vulcanized." "If rolled into sheets these sheets are cut into " the required shape, and then magnetized, either by bringing " the compound in contact with an excited electro-magnet, or " by any other suitable" means. When an inflexible compound is required, pitch, asphalte, or other bituminous substance may be used in place of india-rubber, &c. For chest protectors, belts, bandages, and similar uses the sheet is cut into strips or bars, and applied to any suitable fabric. This compound "may be " applied to various curative purposes and other uses," and " in all cases in which magnetic influence is required to be " locally applied either to human beings, animals, or vegetables."

[Printed, 4*d*. Drawings.]

A.D. 1866, November 16.—Nº 3011.

WOOLLATT, RICHARD.—(*Provisional protection only.*)—" A " new or improved instrument to be employed in producing " local anæsthesia." This instrument is chiefly intended to be used " while extracting or operating upon the teeth." It " resembles an ordinary pair of sugar tongs, except that the " two concave ends are turned down at about right angles to " the two legs of the tongs. The concavity of the ends is sufficient to allow two thicknesses of lint or other soft flexible " substance" "insoluble "in the anæsthetic agent employed, " to lodge therein without pressure except close contact with " the gum." The concave ends with the lint and impermeable *covering* are named " the pads." "On the outside of each pad

" is a spring, which has a tendency to press inwards, and is " formed with a projecting catch to pass through an aperture in " an outer larger spring, which has a tendency to press out- " wards." "When this instrument is applied to the part to be " operated upon, the two pads are pressed against the gum by " pressing the two legs of the instrument together, as in using " a pair of sugar tongs."

[Printed, 4*d*. No Drawings.]

A.D. 1866, November 30.—N° 3154.

TRUEFITT, HENRY PAUL. — (*Provisional protection only.*)— " Improvements in the manufacture of hair, nail, tooth, and " flesh brushes." These are, applying "astringent, emollient, " tonic, stimulating, and other solutions to brushes during the " operation of cleansing the hair, the skin, the nails, or the " teeth;" and for these purposes manufacturing "a stock or " back of wood or woods whose tonic, astringent, or other " principles are capable of solution, whether in water or other " fluids, such as the woods of (trunk or roots) quassia, gentian, " ginger, chiretta, and the woods of certain nuts, such as the " nut of the strychnos and other plants. The bristles may be " of the ordinary material, or combined with filaments of one or " more of these woods, and these are to be attached to the stock " or back in any ordinary manner; or the stock or back or the " bristles may be of an absorbent wood or other material pre- " pared for the purposes of this invention by being steeped in " concentrated solutions or decoctions or infusions of any of the " above or such like woods, or imbued with their essential " principles."

[Printed, 4*d*. No Drawings.]

A.D. 1866, December 19.—N° 3338. (* *)

SIMPSON, MICHAEL HODGE.—" Improvements in apparatus " for the prevention of sea-sickness." By aid of this invention " the traveller may connect his body as rigidly as possible with " the ship." The apparatus may be constructed in the form of either a chair, a sofa, or a sofa-bed, and it is "securely fixed to " any part of the ship." The first (a folding chair) has two arms, one of which may be fixed, whilst the other is capable of a lateral motion; this motion is allowed by connecting the ends of the arm "to slides sliding in grooves or guides formed from end to "end of two wooden rails forming part of the chair, and to "which the slides may be fixed by binding screws," or by other means. At the top of the chair-back is a head rest, which, "independently of its vertical adjustment," may also "run along "a groove formed in the top rail of the black." The traveller, "having settled himself as comfortably as possible by placing the "cushions so that the arms of the chair support him by the arm-"pits without hurting his shoulders or impeding his breathing," should advance the moveable arm towards the fixed one, "so that "both arms shall press against his body," and hold it "as rigidly "as possible," and then turn the set screws. The way in which the other parts of the chair are put together is not described, but two figures in the drawings "represent two back views," in which "the chair is resting on the front legs and on the ends of the "two arms," to enable the traveller to "vary his position when "he is sufficiently accustomed to the motion of the ship;" in one a board (to form a seat) is "fastened to the bottom of the "back of the chair." The arms are furnished with fixed handles, "and other handles are attached to the back legs or other part of "the seat;" the traveller by holding these can "resist with more "certainty the effect of large waves." Modifications:—the arms may be straight or curved, and stuffed like other parts of the chair; coverings, waterproof, and an adjustable footboard may be added. The method of adjusting and securing the moveable arm may be varied; both arms may be moveable; and "the height of the upper ends of the rods may be adapted "to the height of the traveller." The sofa contains several seats constructed on the same principle; "the space between the "moveable arm of one seat and the fixed arm of the next "is sufficient for the slides and set screws." The sofa-bed has two side boards (one moveable) abutting against the sides of the frame; the abutments of the moveable board "are in two "parts and provided with grooves, slides, and set screws, so that "the moveable board may be pressed against the body of the "traveller to hold it firm; straps may also be fixed to either of "the two boards." A head rest similar to that of the chair, "fitted with a soft cushion, may be fixed to the sofa or bed." The moveable parts of either chair, sofa, or bed "may carry a "system of rods provided at one end with a crank and gearing "within reach of the hand of the traveller, and at the other end "with a pinion working in a rack fixed to the frame," or means may be provided for adjusting separately the position of the ends of the moveable piece.

[Printed, 8*d*. Drawings.]

A.D. 1866, December 29.—N° 3433.

NAPIER, Johnstone.—"Improvements in the preparation of "food of a substance to be employed in the place of malt, "and for the medication of food for animals." These are, in reference to this subject as follows:—"Treating wheat, barley, or "other straw, bean or pea hulse or haulm, also bulbous and "tuberous roots, as turnips, mangolds, beetroot, potatoes, also "vegetables, and also meat, the flesh of animals, so as to obtain "a mucilagenous and farinaceous and preserved food" for man and animals. The straw cut into short lengths is saturated with water containing "1 oz. of soda or ½ an oz. of alum," or both together, to a gallon, or the cutting and steaming may dispensed with. The chaff is collected, steamed, digested in boiling water, and disintegrated or pulped in a pulping machine, or otherwise, and placed on a perforated board in layers to filter. Upon this a layer of some flour is placed, and if intended for animals "a "small quantity of linseed, linseed meal, of wheat, oaten or "barley meal, bean or pea, Indian corn or rice meal, or all or "any of these, either in the form of meal or of sago, arrowroot, "tapioca, and similar nutritious comestibles, or whole or entire "grain, or simply bruised or mixed together with sugar and "salt and spice, nutmeg, allspice, cinnamon, ginger, or any of "these may be added (or infused compounds, decoctions, or "confections of any of the above-mentioned substances) or all "or any of these without the straw chaff may be thus treated, "then another layer of each, and so on until the desired thickness "is obtained, when the mass is to be pressed" and dried. Roots and meats are similarly treated. These layers, if desired, may be medicated by mixing "a moderate quantity of alcoholic or "etherial spirits, as brandy, rum, whisky, or druggists rectified "spirit or chlorinated ether as stimulants," sulphur, nitre, iron, chinchona, gentian, aloes, &c.

[Printed, 6*d*. No Drawings.]

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